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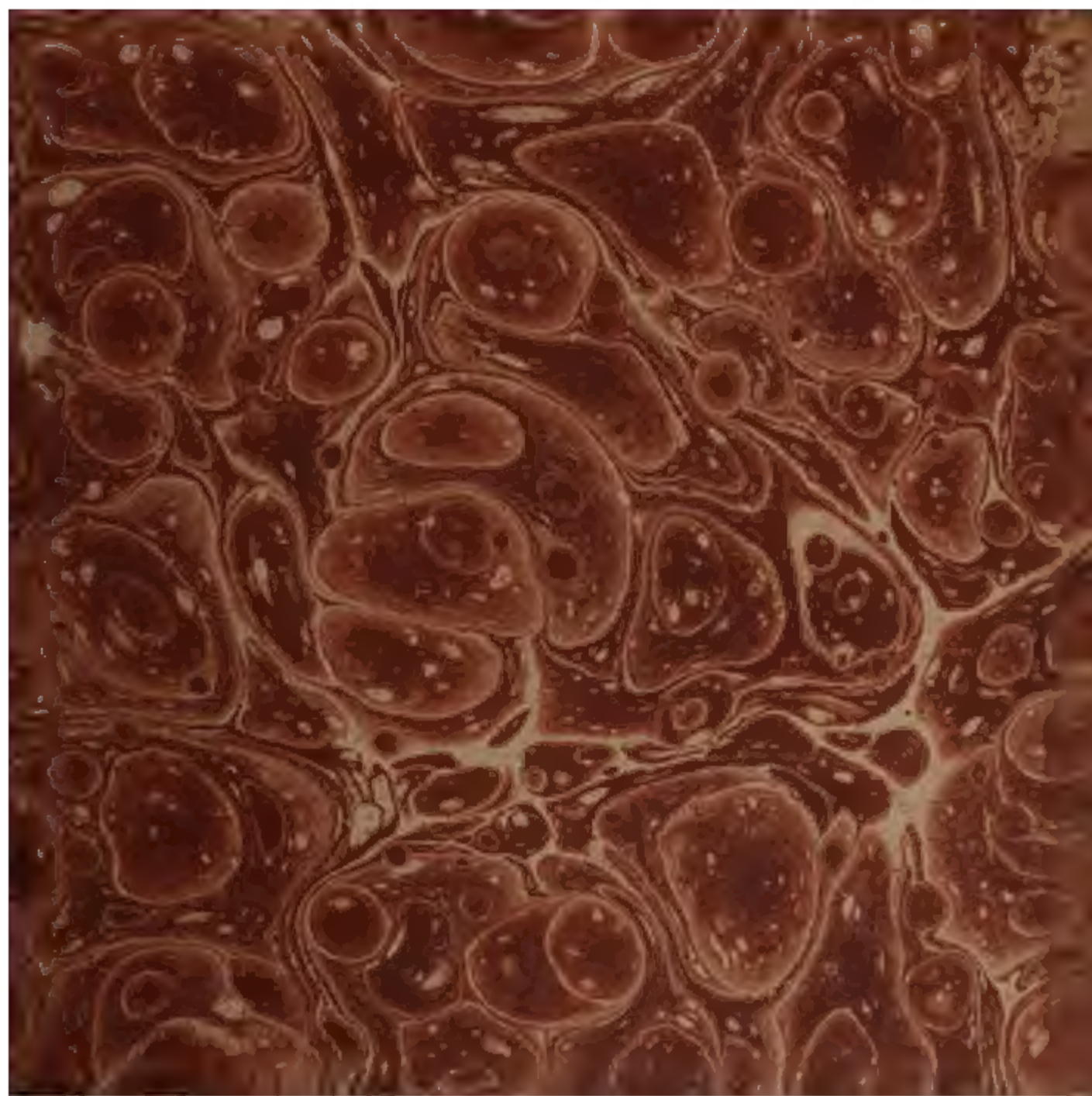


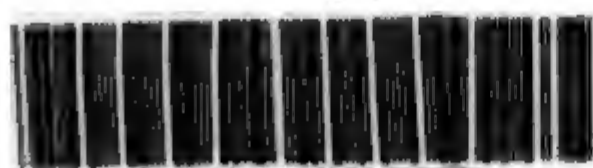
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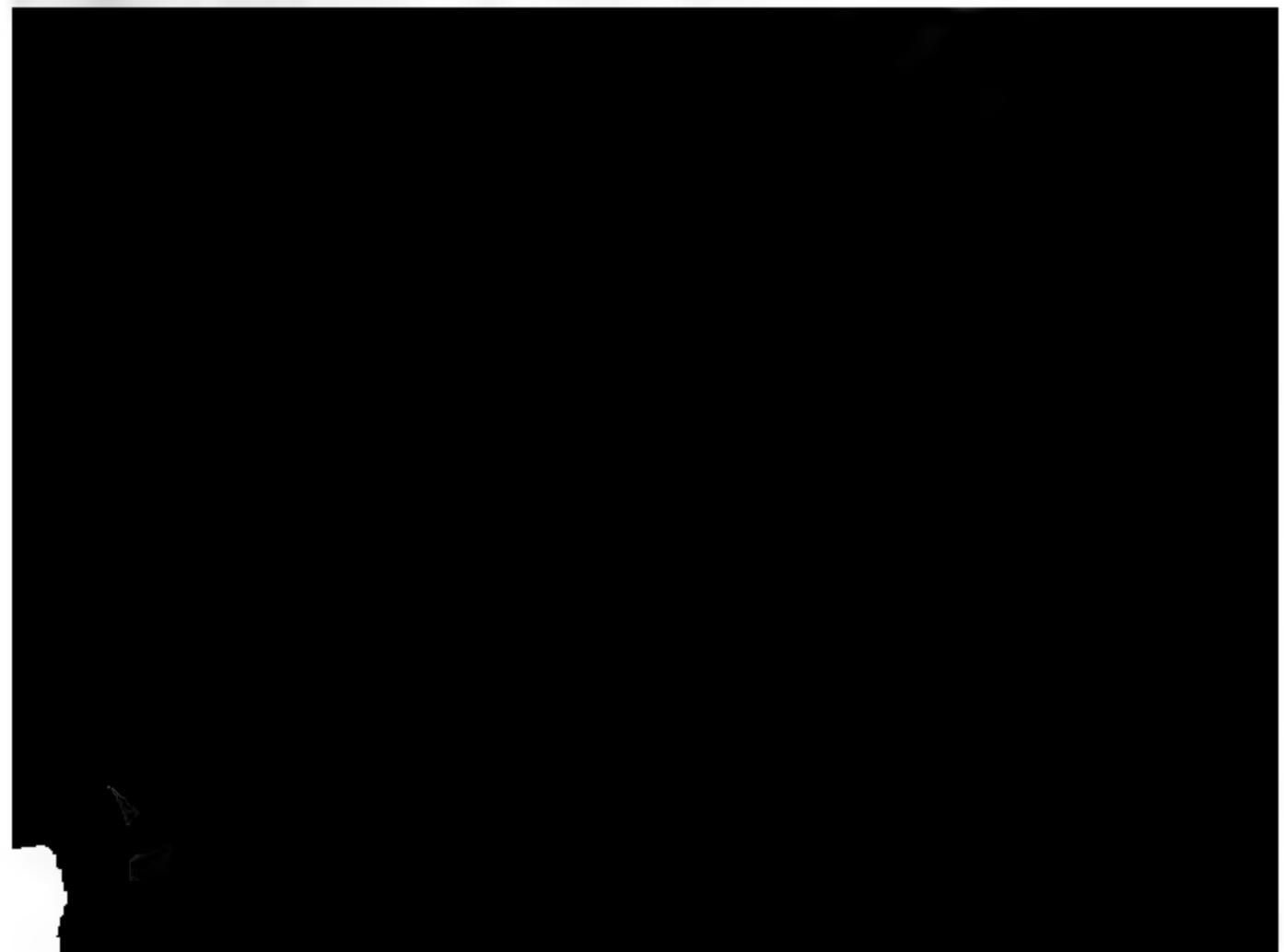


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# ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,  
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

**JAMES EDWARD SMITH, M.D. F.R.S.**

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE  
ACADEMIES OF STOCKHOLM, UPSAL, TURIN,  
LISBON, LUND, BERLIN, PHILADELPHIA, AND  
THE NAT. HIST. SOCIETY OF PARIS;  
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY  
**JAMES SOWERBY, F.L.S.**

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—“VIRESCERE ACQUIRIT RUNDO.”—*Virg.*

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VOL. XIV.

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12. 1830-1845  
13. 1845-1860  
14. 1860-1875  
15. 1875-1890  
16. 1890-1901

17. 1901-1910



[ 1874 ]

EQUISETUM sylvaticum.

*Branched Wood Horsetail.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. Catkin composed of peltate scales, flowering on their inside. Partial calyx of 2 valves. Seeds numerous, naked, enfolded by 4 pollen-bearing filaments.

SPEC. CHAR. Branches compound, curved downwards, rough.

SYN. Equisetum sylvaticum. Linn. Sp. Pl. 1516. Sm. Fl. Brit. 1102. Huds. 447. With. 753. Hull. 233. Lightf. 646. Relh. 403. Sibth. 263. Abbot. 221. Bolt. Fil. 60. t. 82, 33. Hedw. Theor. 33. t. 1. Raii Syn. 130. Ehrh. Crypt. 161.

β. E. sylvaticum procumbens, setis uno versu dispositis. Dill. in Raii Syn. 131.

---

THIS very elegant species occurs in moist shady places, often under dripping rocks, chiefly in the mountainous counties, fructifying in the early spring. Our specimen was gathered by Lady Wilson between Glasgow and Edinburgh.

The whole plant conveys the idea of some Indian palm-tree, with its simple stem, and numerous whorls of compound, drooping, slender, roughish branches, crowned at the summit by a cone tessellated with peltate scales. Each of these scales is beset at its back with several bivalve partial calyxes, enfolding numerous minute seeds, (technically speaking) naked, that is, destitute of a seed-vessel, though each of them is enfolded with 4 spiral filaments, whose powdery summits are with great reason presumed by Hedwig to perform the office of anthers, as we have already mentioned, p. 915.

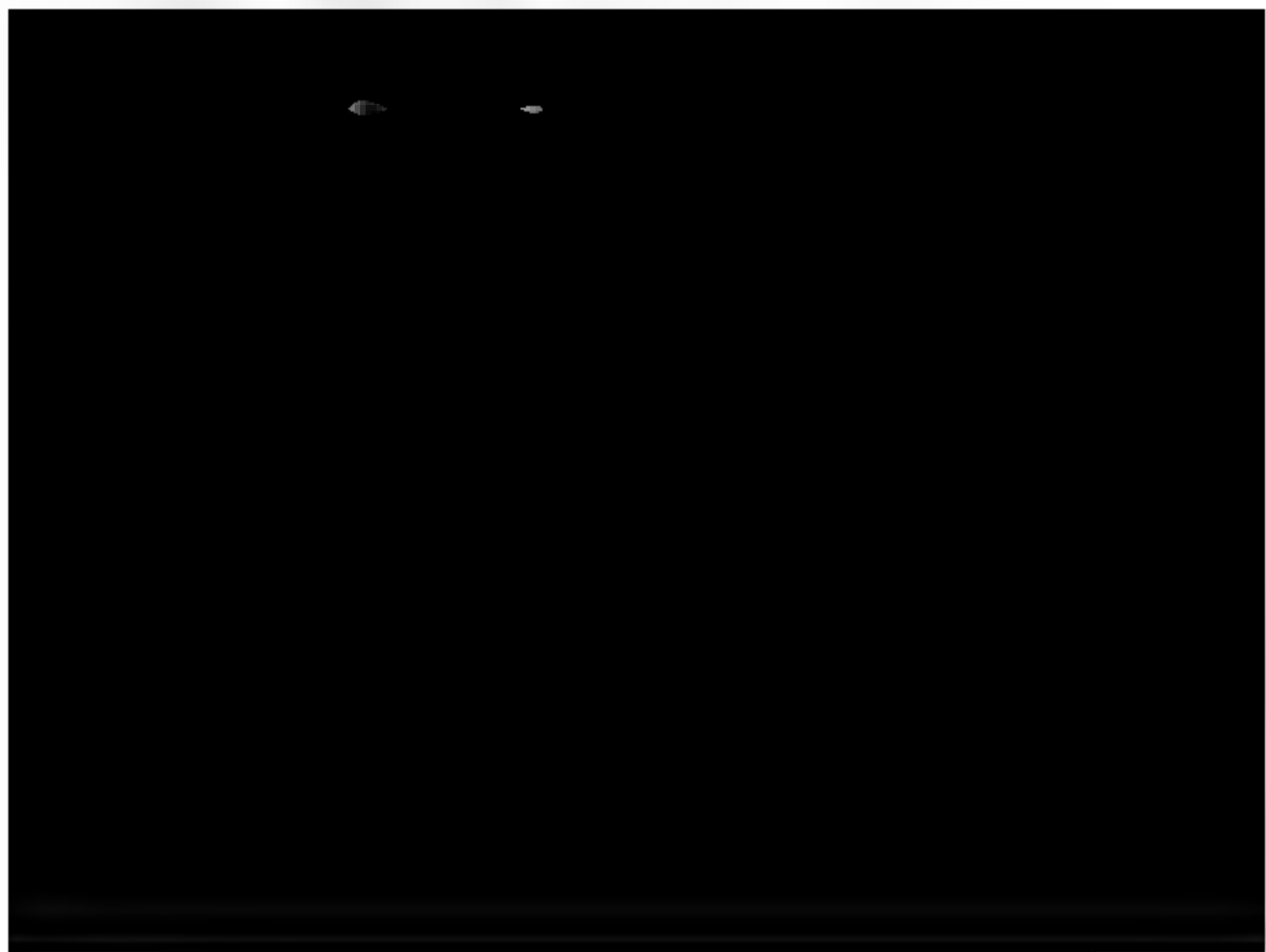
The root of this plant is perennial, the stems annual, 12 or 18 inches high. The branches are generally not pushed forth till the cone is nearly ripe.

1871



*Specimen collected by Dr. J. Smith, London*





[ 002 ]

1941-1942

1943-1944

1945-1946

1947

1948-1949

1950-1951

1952-1953

1954-1955

1956-1957

1958-1959

1960-1961

1962-1963

1964-1965

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2006-2007

2008-2009

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2014-2015

2016-2017

2018-2019

2020-2021

**EQUISETUM arvense.**

*Corn Horsetail.*

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Catkin* composed of peltate scales, flowering on their inside. *Partial Calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

**SPEC. CHAR.** Sterile stems branched in every direction; the branches roughish, with simple angles: flowering ones unbranched; their sheaths distant, with broad deep teeth.

**SYN.** *Equisetum arvense.* Linn. *Sp. Pl.* 1516. Sm. *Fl. Brit.* 1103. Huds. 447. With. 753. Hull. 233. Relh. 403. Sibth. 263. Abbot 222. Curt. Lond. fasc. 4. t. 64. Bolt. Fil. 62. t. 34.

*E. arvense*, longioribus setis. Raii Syn. 130.

*β. E. pratense*, longissimis setis. Dill. in Raii Syn. 131.

**IN** low moist cornfields very frequent, and according to Mr. Curtis, very troublesome to the farmer, as being difficult of extirpation, and noxious to cattle, especially kine. We presume its action on their intestines may be chiefly mechanical, considering the sharp rough angles and points with which its whole form abounds, and the abundance of flinty earth in its cuticle, which forms a file similar to, though finer than *E. hyemale*, t. 915.

The root is creeping and perennial. In April it throws up several simple, pale brown, smooth, juicy stems, a span high, each encompassed with about 4, rather distant, furrowed, brown-toothed sheaths, and bearing a terminal, upright, large, ovate-oblong, brown catkin. The sterile stems appear some time afterwards, and are much taller, jointed, furrowed, rough-edged, beset from top to bottom with numerous, whorled, simple, jointed branches, whose joints are deeply furrowed, and the intermediate angles or ridges are simple, one of them extending to the point of each tooth. The variety *β* is but a trifling one; see Bauhin's *Theatrum* 246.

The flowering stems of this plant were evidently mistaken for our *E. variegatum*, t. 1987, by Mr. Lawson. See Raii Syn. 130. n. 3.



*Fig. 1. Published by J. Smith, London.*







**EQUISETUM palustre.**

*Marsh Horsetail.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Catkin* composed of peltate scales, flowering on their inside. *Partial Calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

**SP. CHAR.** Stems deeply furrowed, branched; branches simple, erect, roughish, with simple angles. *Catkin* terminal.

**SYN.** *Equisetum palustre.* *Linn. Sp. Pl.* 1516. *Sm. Fl. Brit.* 1103. *Huds.* 448. *With.* 754. *Hull.* 233. *Retz.* 403. *Sibth.* 264. *Abbot* 222. *Bolt.* *Fil.* 64. t. 35. *Raii Syn.* 131. *Ger. em.* 1114.

*β. E. palustre, tenuissimis et longissimis setis.* *Dill. in Raii Syn.* 131.

*γ. E. palustre minus polystachion.* *Ibid.* t. 5. f. 3.

---

**THIS** grows in a black boggy soil not unfrequently, and is readily known from the last by its fructification terminating the leafy stems. The roots are perennial and creeping. Stem branched throughout, deeply furrowed, with prominent, roughish, intervening angles. Branches whorled, upright, various in length, simple, jointed, deeply furrowed, with simple intermediate angles, minutely granulated in the surface, but scarcely rough to the touch. *Catkin* terminal, solitary, blackish, cylindrical inclining to ovate; its scales at length becoming widely separated. Dillenius has delineated, from Buddle's herbarium, a variety in which many of the upper branches bear catkins, as well as the main stem.

The branched state of *E. limosum*, t. 929, somewhat resembles this, but has a much thicker stem, with about twice the number of furrows, and those much more superficial than in the species we are describing.

2021

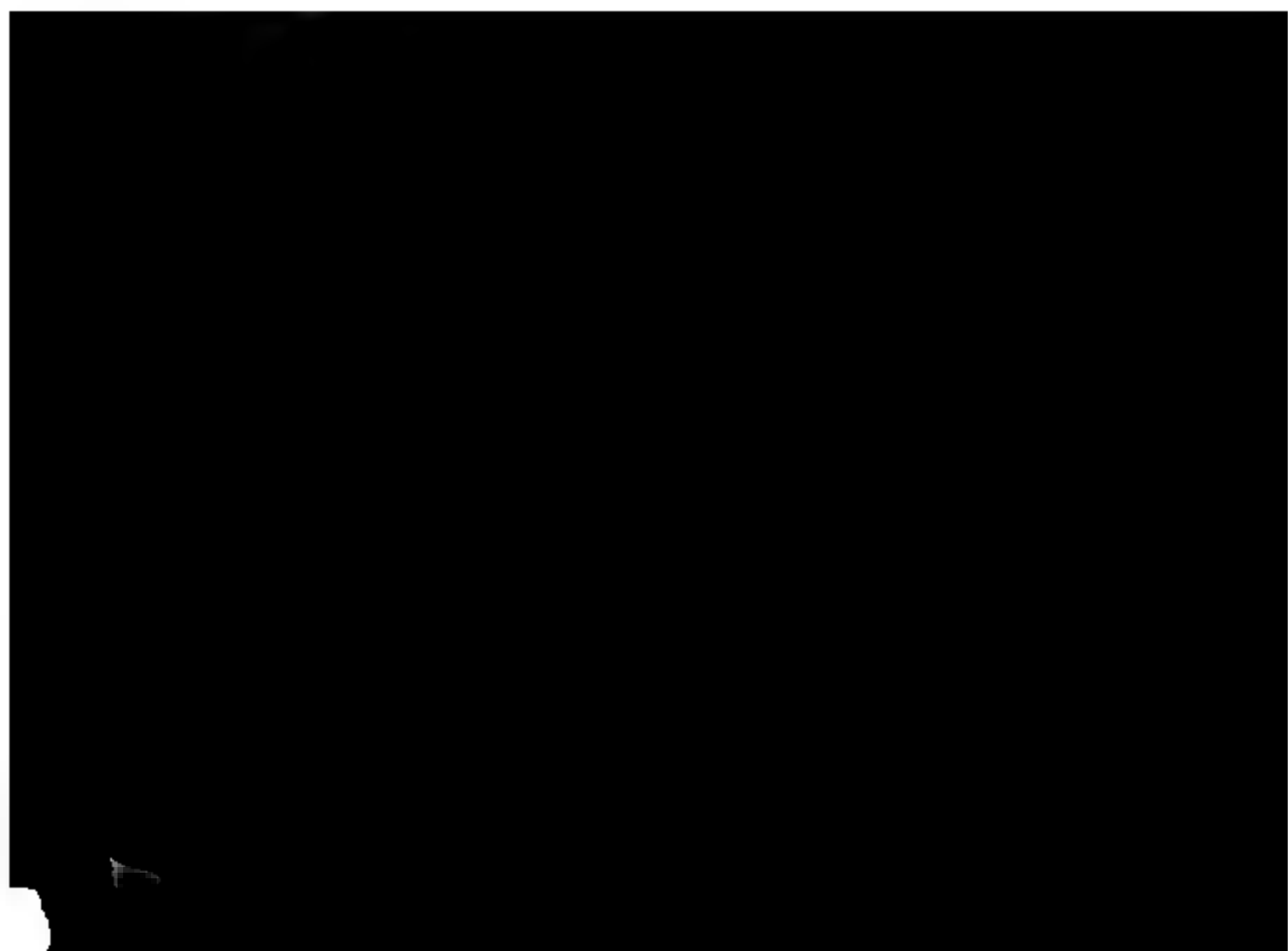


*Her. coll. Bot. Garden, London*



1

2





**EQUISETUM fluvatile.**

*Great Water Horsetail.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Catkin* composed of peltate scales, flowering on their inside. *Partial Calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

**SPEC. CHAR.** Sterile stems with innumerable roughish branches, whose angles are double: flowering ones unbranched; their sheaths not far distant, with numerous slender teeth.

**SYN.** *Equisetum fluvatile.* Linn. *Sp. Pl.* 1517. Sm. *Fl. Brit.* 1104. Huds. 448. With. 755. Hull. 233. Relh. 404. Sibth. 264. Abbot 222. Bolt. *Fil.* 66. t. 36, 37.

*E. majus.* Rait Syn. 130.

*E. Telmateia.* Ehrh. *Crypt.* n. 31.

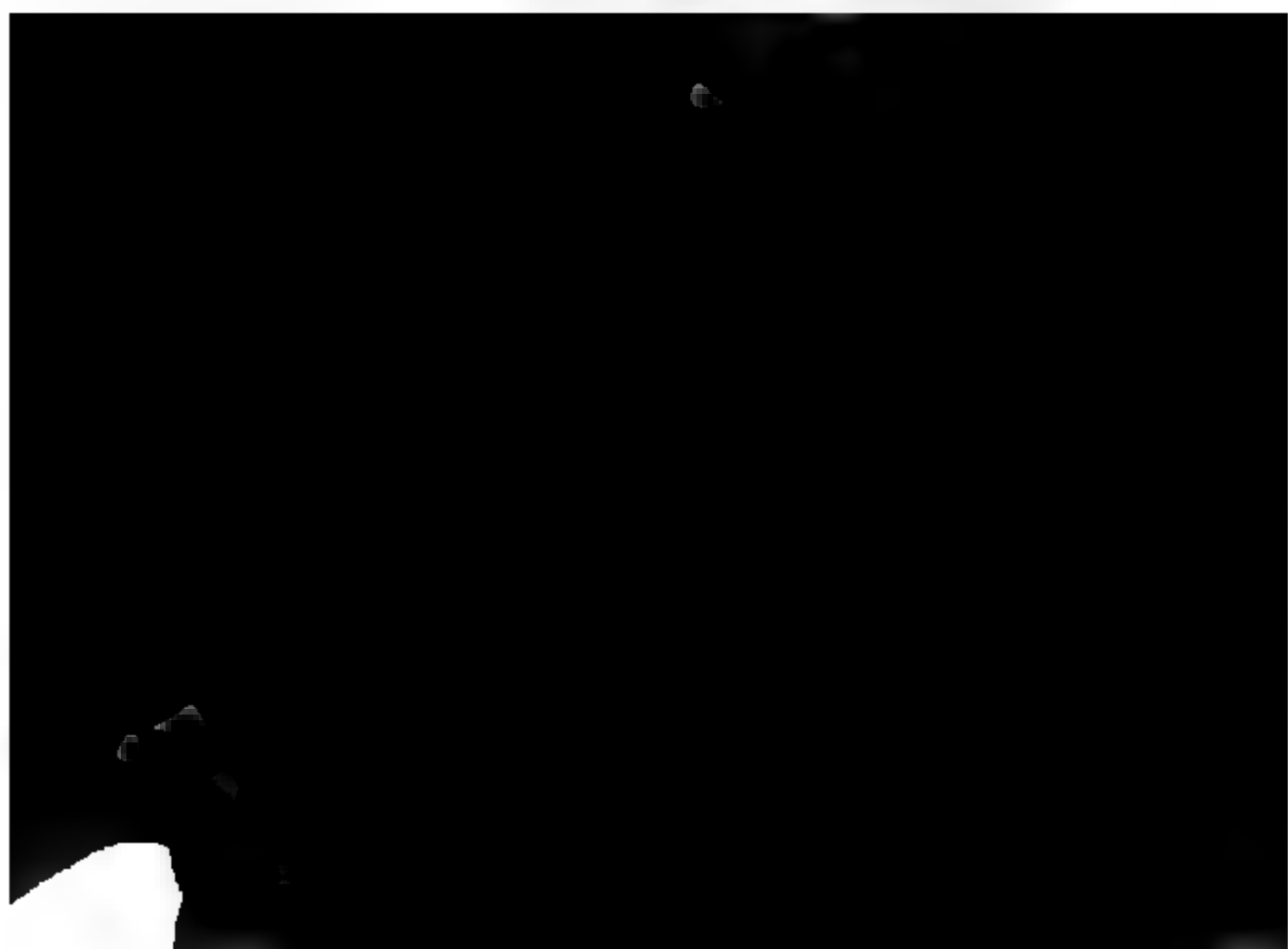
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**FOUND** here and there in watery places, about the sheltered banks of rivers and lakes, where its large long-branched stems, often 6 feet high, make a magnificent and Indian-like appearance. The flowering stalks come forth to about an



From the collection of J. C. Smith, London







EQUISETUM limosum.

*Smooth Naked Horse-tail.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Catkin* composed of peltate scales, flowering on their inside. *Partial calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

SPEC. CHAR. Stem partly naked, smooth as well as the branches. *Catkin* terminal.

SYN. *Equisetum limosum*. Linn. *Sp. Pl.* 1517. *Huds.* 448. *Witb.* 755. *Hull.* 234. *Relb.* 385. *Sibth.* 264. *Abbot.* 222. *Bolt. Fil.* 68. 1. 38.

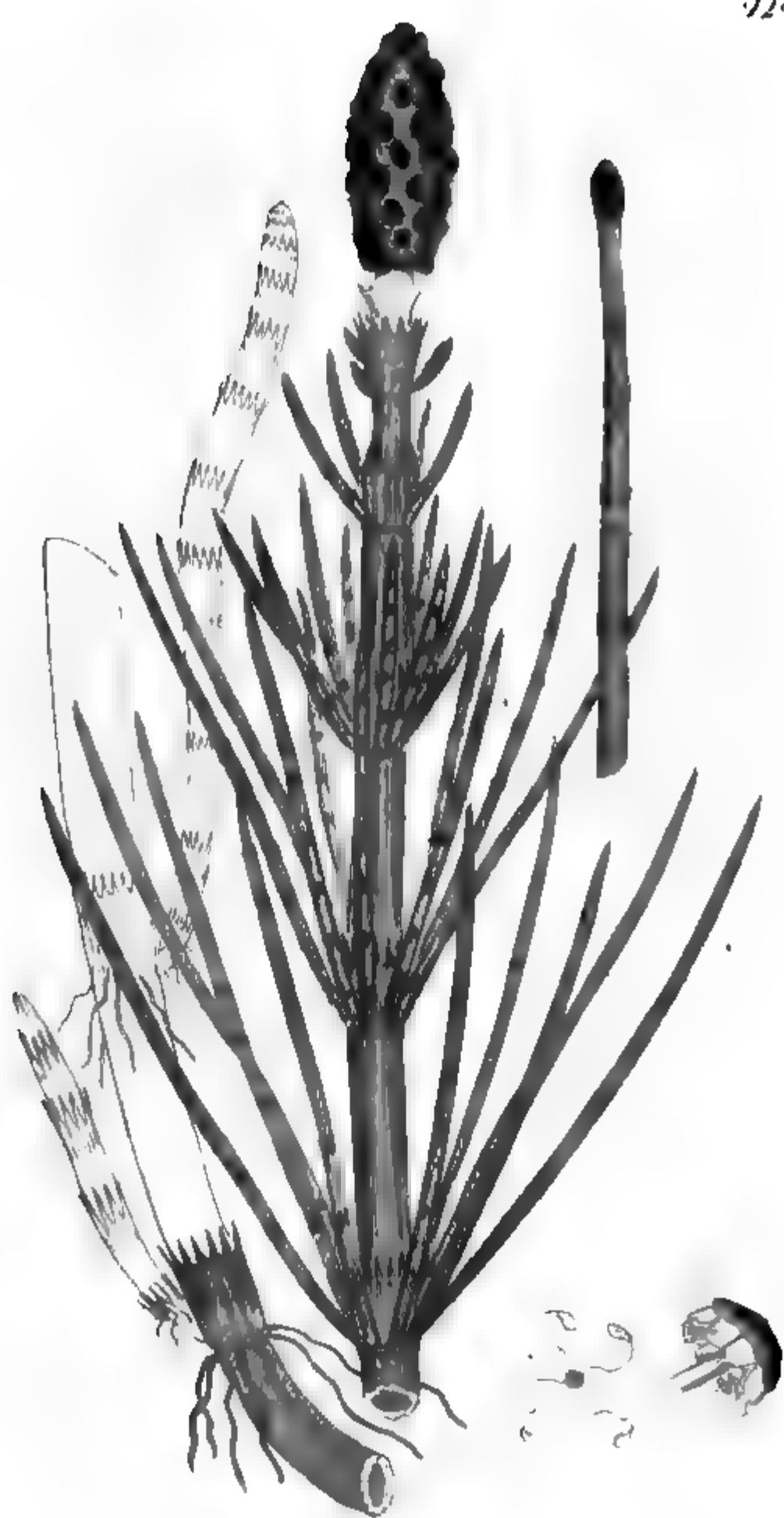
*E. nudum lævius nostras.* *Raii Syn.* 131. t. 5. f. 2.

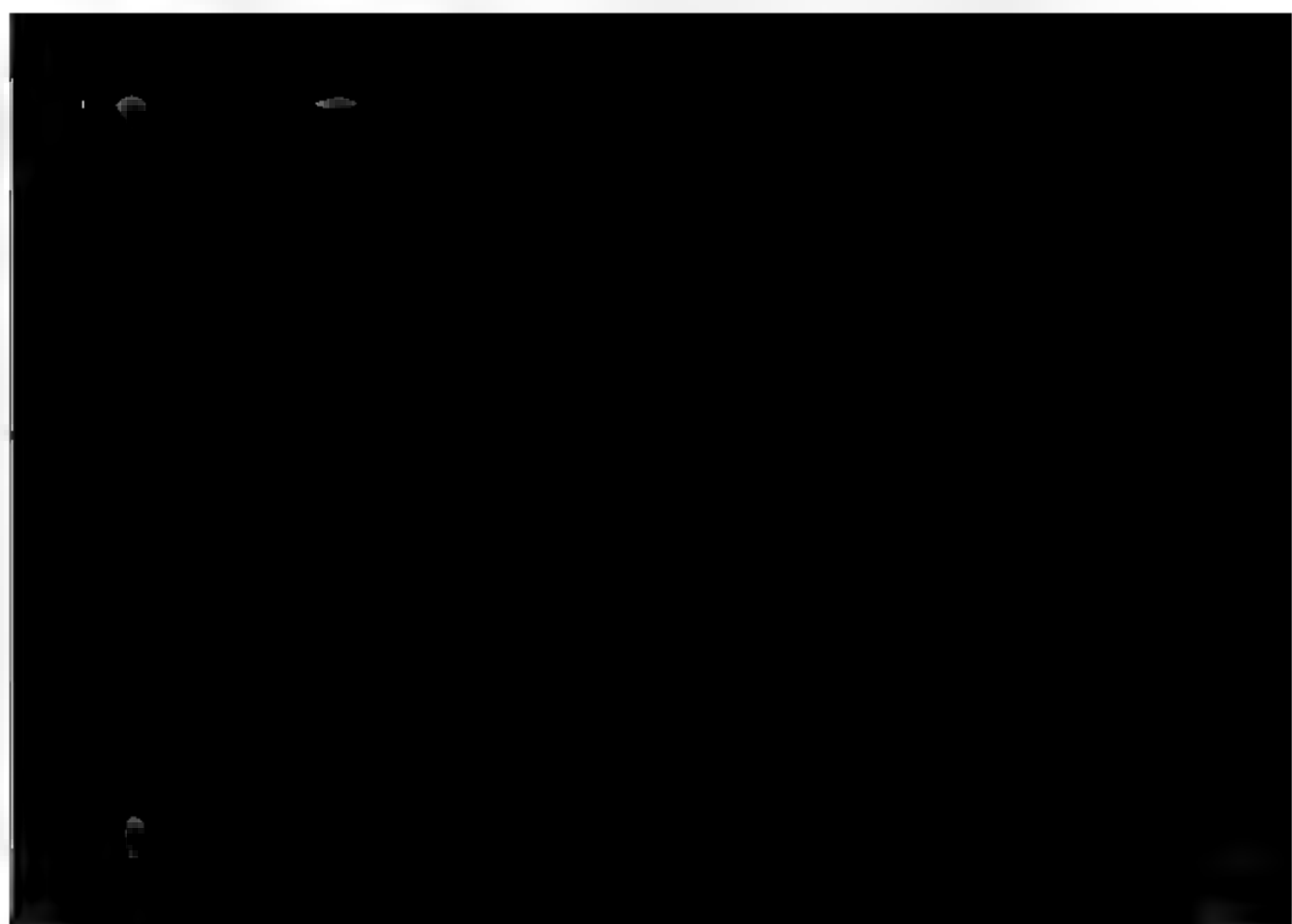
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ONE of the most common of its genus in watery marshy places, where it comes to perfection and fructifies early in June.

Root perennial, creeping. Stems erect, 2 feet high, jointed, furrowed, quite smooth to the touch, simple and quite naked in their lower part, but towards the top generally set with a few simple, erect, whorled branches, which are furrowed and smooth like the stem. The teeth of all the sheaths are a little blackish. *Catkin* solitary, terminal, large, ovate, brown, composed of many series of close-set scales, producing seeds as in *E. hyemale*, t. 915.

The *Equisetum* mentioned in Ray's Synopsis, 132, n. 12, appears to have been a specimen with more branches than usual. Many have confounded the plant before us with the *fluviatile* of Linnæus, who himself did not well understand their differences. The latter is a much larger plant, bearing its fructification on early simple stalks, as in *E. arvense*, while its principal stems are whorled from top to bottom with numerous very long spreading branches, and produce no catkins.









**EQUISETUM** *hyemale.*

*Rough Horse-tail.*

**CRYPTOGAMIA** *Filices.*

**GEN. CHAR.** *Catkin* composed of peltate scales, flowering on their inside. *Partial calyx* of 2 valves. *Seeds* numerous, naked, ensfolded by 4 pollen-bearing filaments.

**SPEC. CHAR.** Stem naked, very rough, mostly branched at the base. Sheaths whitish, black at the base and summit.

**SYN.** *Equisetum hyemale.* *Linn. Sp. Pl.* 1517. *Huds.* 448. *Wub.* 756. *Hull.* 234. *Lightf.* 650. *Relb.* 385. *Abbot.* 222. *Bolt. Fil.* 70. t. 39.

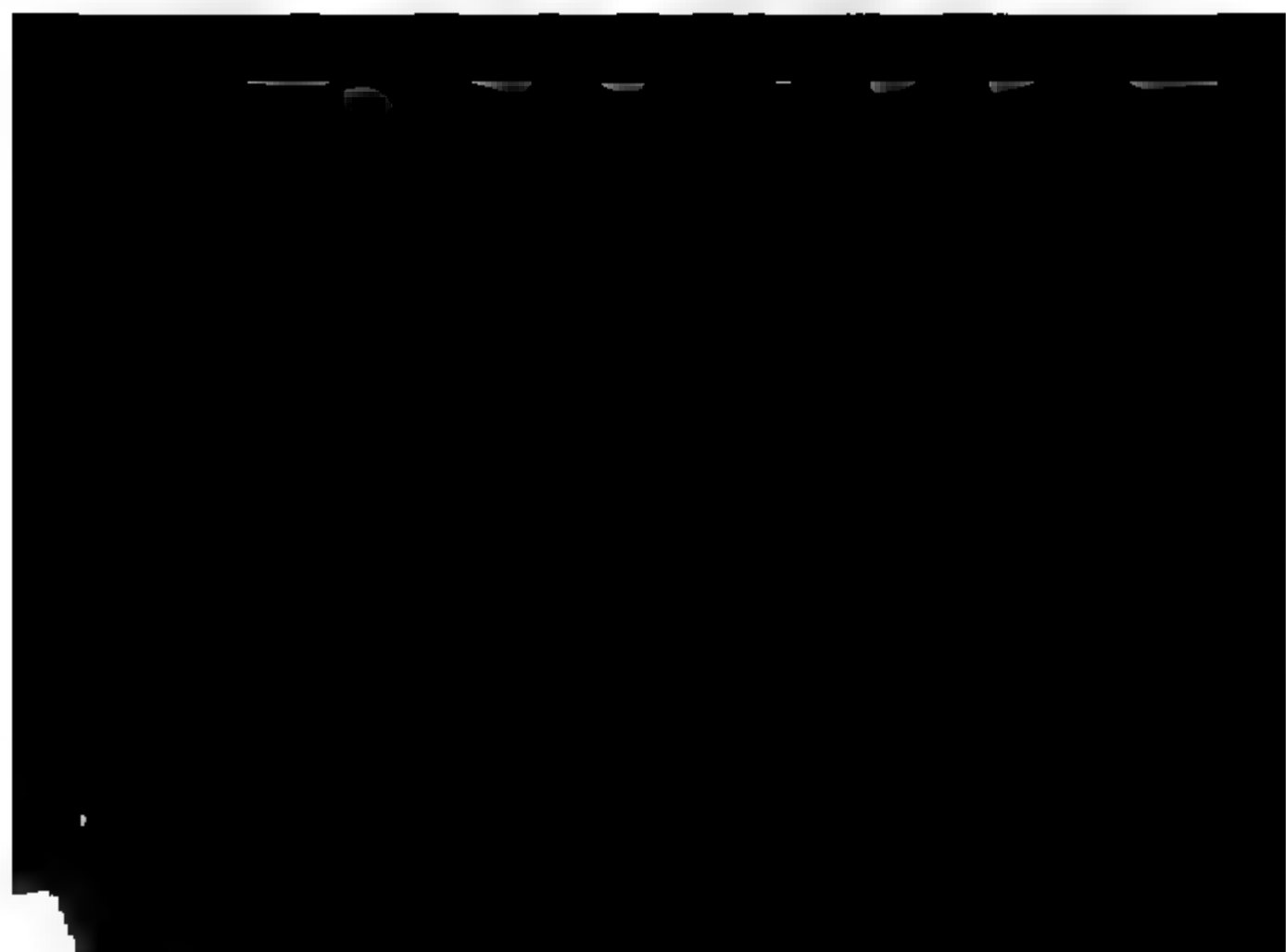
*E. nudum.* *Raii Syn.* 131.

**GATHERED** near Rippon, Yorkshire, by Mr. W. Bruntton junior of that place. Although generally esteemed a very rare plant, it is found, always indeed sparingly, in boggy woods and thickets in several parts of Britain.

The roots are perennial, black, creeping. Stems erect, simple, except at the base, naked, round, jointed, hollow, furrowed, rough, each joint encircled with a membranous, short,



*Equisetum hyemale* L. var. *terrestris* L.







**EQUISETUM** *variegatum*.  
*Variegated Rough Horsetail.*

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** Catkin composed of peltate scales, flowering on their inside. *Partial calyx* of 2 valves. *Seeds* numerous, naked, enfolded by 4 pollen-bearing filaments.

**SPEC. CHAR.** Stem naked, very rough, branched at the base. Sheaths black, with white, membranous, lanceolate teeth. Catkin terminal.

**SYN.** *Equisetum variegatum*. *Schleich. Catal.* 21.

*E. campanulatum*. *Poiret in Lam. Encycl.* v. 5. 613.

*E. nudum minus variegatum basileense*. *Bauh. Pin.* 16. *Prodr.* 24. *Theatr.* 250.

*E. n.* 1678. *Hall. Hist.* v. 3. 3.

**F**OR the discovery of this very distinct species of *Equisetum* in Britain, we are obliged to Mr. G. Don, who gathered it, in July 1807, on the sands of Barry on the sea coast of Angushire. It is preserved in Jacquin's herbarium, which now makes a part of Sir J. Banks's rich collection, by the apt name of *variegatum*, a name peculiarly eligible, as adopted from the synonym of C. Bauhin, the first discoverer of this plant, and as being that by which it is known in Switzerland. There is a Swedish specimen in the Linnæan herbarium, confounded with *hyemale*, t. 913, and in the *Fl. Suec.* it is not distinguished as even a variety, though both appear to grow in Sweden.

The root is perennial, black, creeping, with very woolly fibres. Stems from 4 to 6 inches high, slender, deeply furrowed, rough like those of *E. hyemale*; in our plants decumbent or ascending, and zigzag, in Swiss ones erect and straight. This difference we conceive to arise from the different places of growth, as in *Carex incurva*, t. 927, and *juncifolia* of Allioni, erroneously separated by some botanists. Each joint is encircled with a little short black cup-like sheath, crowned with a row of lanceolate white membranous teeth, by which the species is evidently distinguished from *hyemale*. The uppermost sheath is very much larger than the rest. Catkin short, ovate, blacker than in the *hyemale*, and on a more slender stalk.

1987



*Ph. & Myc. Bot. Soc. London* / 1987





OPHIOGLOSSUM *vulgatum.**Adder's Tongue.*CRYPTOGAMIA *Fike.*

**GEN. CHAR.** *Capsules* numerous, connected in a two-ranked spike by an enveloping membrane, roundish, bursting transversely, destitute of a ring. *Seeds* many, very minute.

**SPEC. CHAR.** Leaf ovate, without veins, bearing the spike.

**SYN.** *Ophioglossum vulgatum.* *Lin. Sp. Pl.* 1518. *Hudf. Fl. An.* 449. *Witb. Bot. Arr.* v. 3. 45. *Relb. Cant.* 386.

*Ophioglossum.* *Raii Syn.* 128.

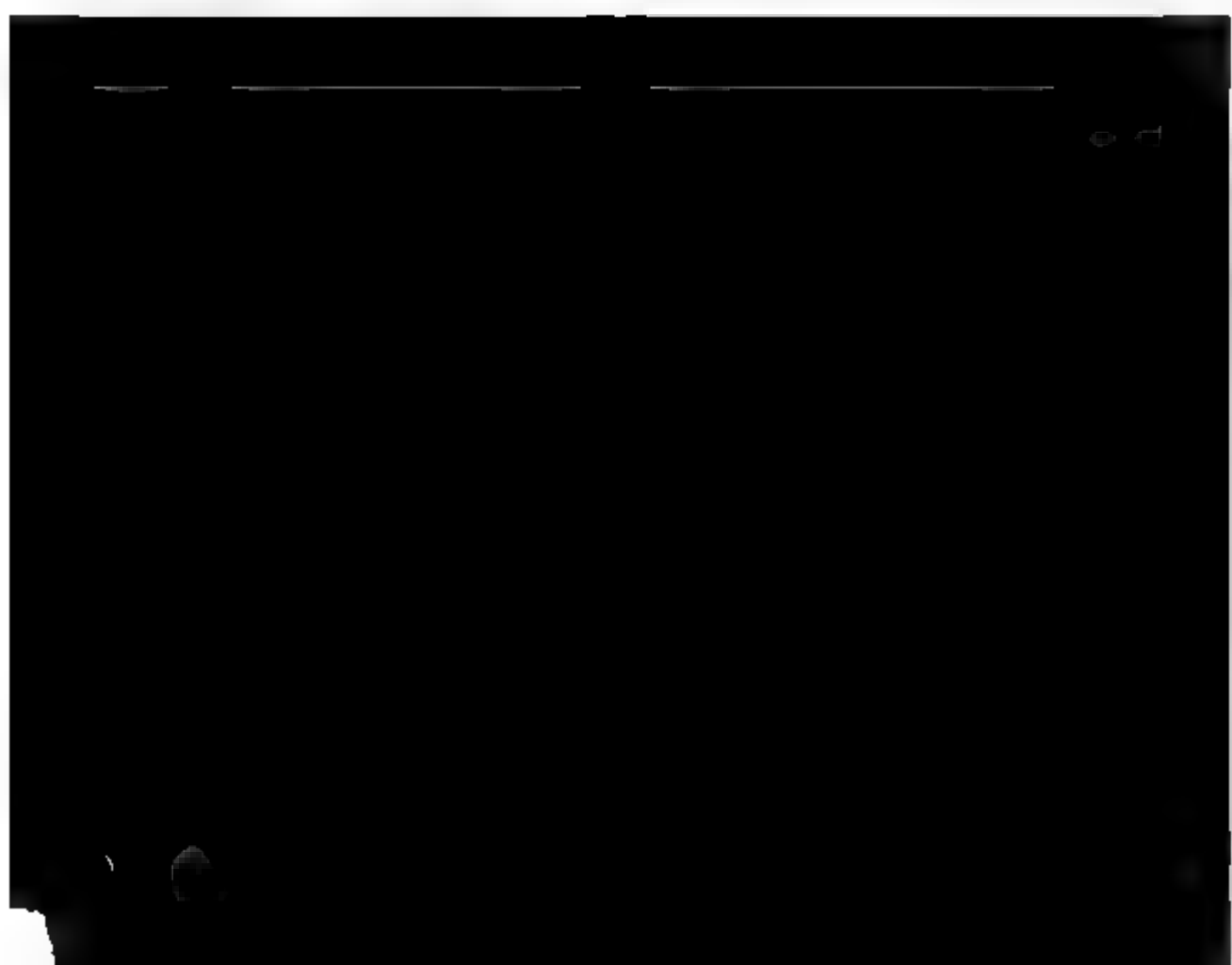
**H**ERE we have another vulnerary, which Ray says "is excellent, either taken internally or applied outwardly;" and that "an infusion of its leaves in olive oil is famous for curing wounds and ulcers. The powder is good for ruptures." Gerarde remarks, that the above oil is of so beautiful a green, many have supposed it made of verdegris. It is at present out of use, though astringent and tonic; the shops abounding with much better medicines of that description.

This singular vegetable is by no means very uncommon in boggy meadows, and is to be found in perfection about May, or not later than June. Mr. B. M. Forster favoured us with this specimen from a field at Walrhamstow. The whole herb is succulent and very smooth. Roots of a few simple fibres like those of the Orchis tribe, from whose point of union arises a simple stem, with one or more buds for the next year. The spike, generally simple, is very rarely found cloven more or less deeply. When ripe it splits transversely on each side into numerous little portions, from whose interstices the seeds are discharged, the capsular valves being imbedded in the portions of the spike.

The genus has little connexion with ferns, except through the medium of the true *Osmundas*—see Dr. Stokes's excellent remarks in the third volume of *Bot. Arr.* p. 46, &c. The Linnaean term *frons* cannot without violence be used in the genus of *Ophioglossum*, as there is no necessary connexion between the leaf and fructification, one species, *O. nudicaule*, if not more, having them on distinct stalks.









OSMUNDA Lunaria.

*Moonwort.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Capsules* naked, globose, two-valved.

SPEC. CHAR. Stalk on the stem, solitary. Frond pinnate, solitary.

SYN. *Osmunda Lunaria.* Linn. *Sp. Pl.* 1519. *Huds. Fl. An.* 449. *With. Bot. Arr.* vol. 3. 46. *Relh. Cant.* 386. *Sibth. Ox.* 266.

*Lunaria minor.* *Raii Syn.* 128.

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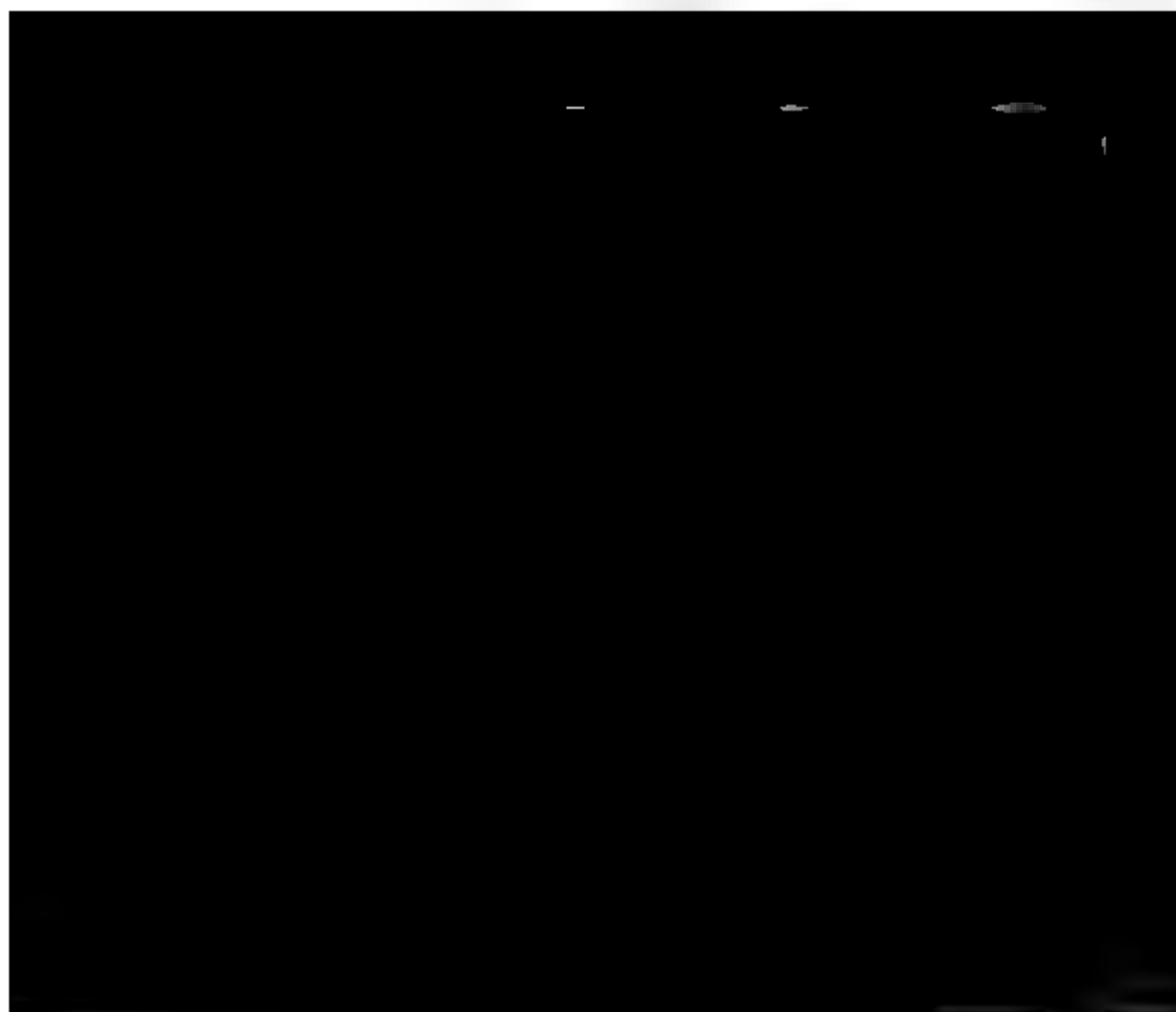
IN plate 209 of the present publication we exhibited the other only true British species of *Osmunda* (for *O. Spicant.* is a *Blechnum*, and *O. crispa* a *Pteris*), and we then promised to give the fructification in a future plate. All we know of that part is the capsule, consisting of a small globe, separating into two equal hemispheres, without any ring or bandage, and containing innumerable seeds like fine dust.

The Moonwort, so called from an obscure crescent-like shape in its leaves, is by no means a common plant; it grows in both moist and dry pastures, among grass, and arrives at perfection the end of June or early in July. Mrs. Kett of Seething favoured us with this specimen from a meadow near her house.

The root consists of thick fibres, from which arises one simple stem, or (as analogy requires it to be called) a frond, composed of a pinnate notched leaf, and a branching spike of capsules. Every part is smooth, but not polished, of a pale green, the capsules turning to a yellowish brown as they ripen. Sometimes the leaf is bipinnate, but that variety is rare.



1790 Published by J. Kew, London







OSMUNDA regalis.

*Osmund royal, or Flowering Fern.*

---

CRYPTOGAMIA Filices,—*spicata*.

GEN. CHAR. Capsules naked, globose, two-valved.

SPEC. CHAR. Frond bipinnate, terminating in a compound cluster of fructification.

SYN. *Osmunda regalis*. *Linn. Sp. Pl.* 1521. *Huds. Fl. An.* 449. *Willd. Bot. Arr.* v. 3. 47.

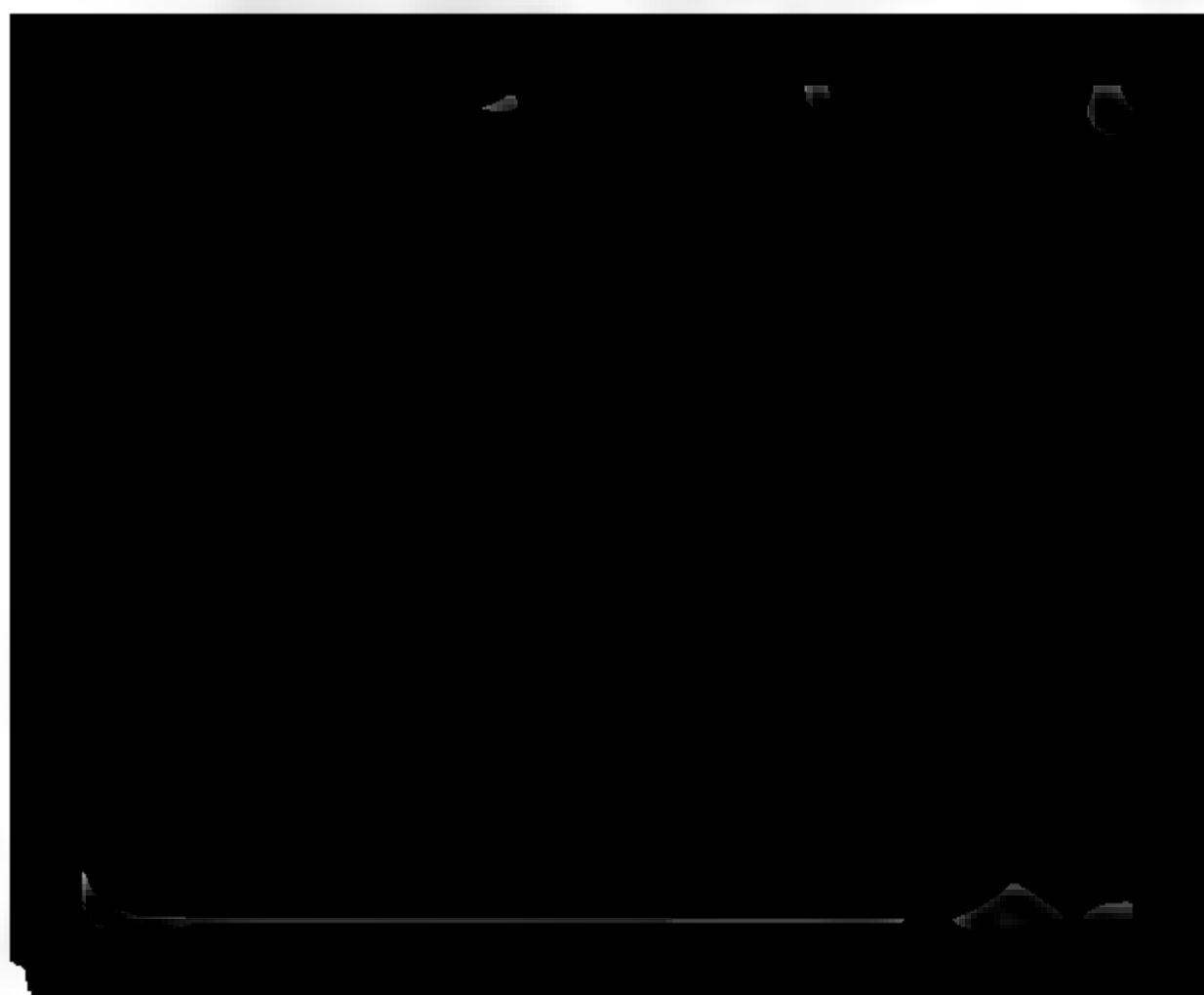
*Filix ramosa non dentata florida*. *Raii Syn.* 125.

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OSMUNDA belongs to that tribe of ferns whose fructification, instead of being borne on the back of the frond, is produced by a metamorphosis, as it were, of the leaf itself; neither are the capsules bound with a ring, as in most of the dorsiferous ferns. See an excellent note of Dr. Stokes's *Bot. Arr.* v. 3. 46. and Dr. Smith's paper *de filicum generibus dorsiferarum*, in the 5th vol. of the Memoirs of the Turin Acad. p. 147.

The species before us occurs here and there in watery shady meadows and spongy bogs, making a conspicuous figure with its clusters of fructification in July or August. Its root is large and woody, a creeping one, of which it is furnished







## LYCOPODIUM clavatum.

*Common Club-moss.**CRYPTOGAMIA Musciforme.*

**GEN. CHAR.** *Capsules* axillary, solitary, naked, kidney-shaped, of two elastic valves and one cell. *Seeds* numerous, minute.

**SPEC. CHAR.** Leaves scattered, terminating in threads. Spikes cylindrical, on footstalks, about two together.

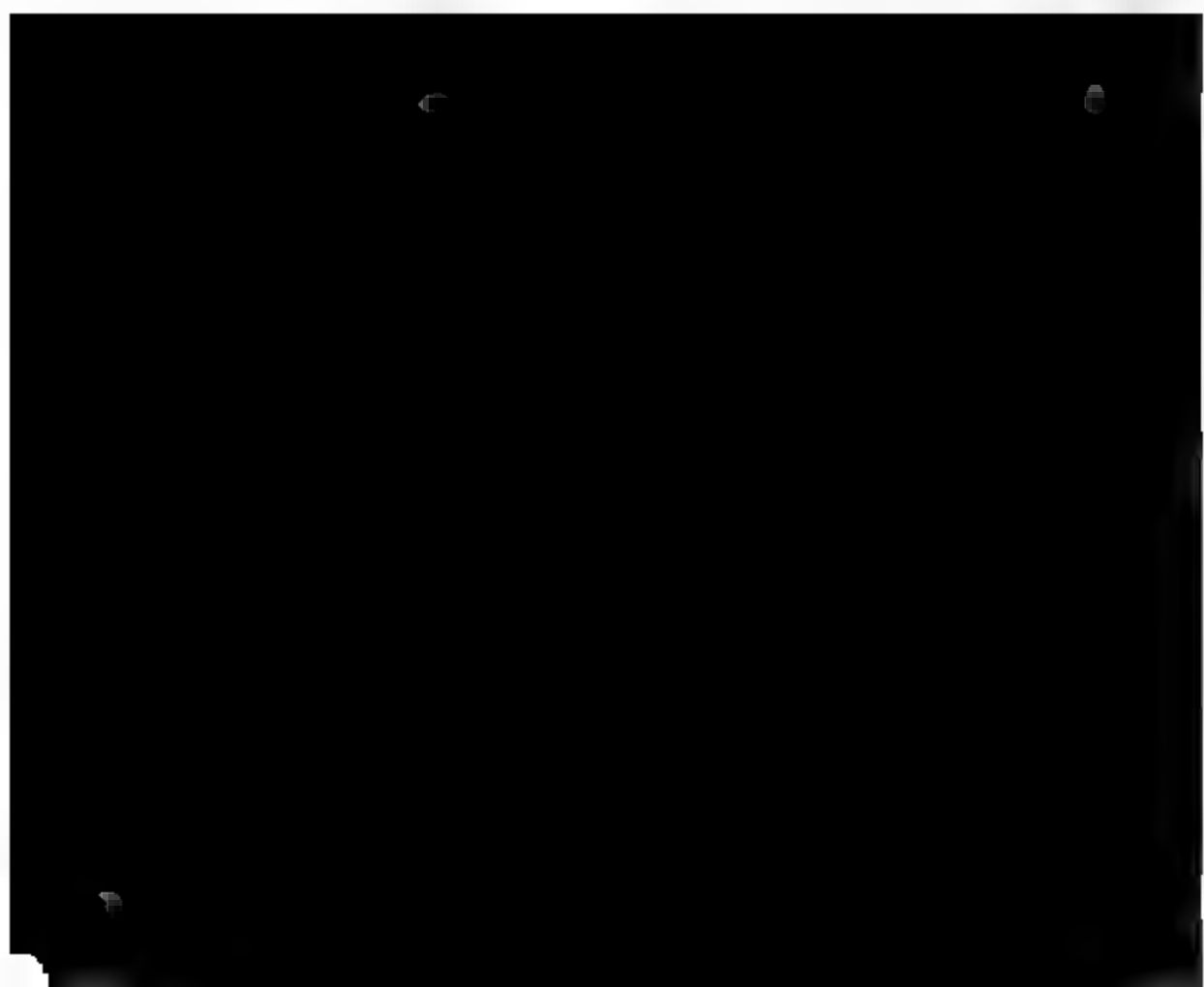
**SYN.** *Lycopodium clavatum.* *Linn. Sp. Pl.* 1564.  
*Huds. Fl. An.* 462. *Witb. Bot. Arr.* v. 3. 68.  
*Relb. Cant.* 393. *Sibth. Oxon.* 265.

*Lycopodium.* *Raii Syn.* 107.

*L. vulgare pilosum, amfragosum et repens.* *Dill. Musc.* 441. t. 58. f. 1.

**COMMON** on mountainous heaths, especially in the North. The branched stem creeps close to the ground to a great extent, throwing out a strong branched white perennial root at the distance of every two or three inches. The leaves are crowded thick together, entirely covering the stem, all curved upwards from the ground, lanceolate, finely serrated, tipped with a white filament. Flowering branches erect, solitary,









## LYCOPODIUM Selaginoides.

*Prickly Club-Moss.*

## CRYPTOGAMIA Filices, exannulatae.

GEN. CHAR. *Capsules* axillary, solitary, of 2 valves, naked, somewhat kidney-shaped, compressed.

SPEC. CHAR. Leaves scattered, ciliated, lanceolate; the floral ones larger and more spreading.

SYN. *Lycopodium Selaginoides*. Linn. *Sp. Pl.* 1565. *Huds.* 463. *With.* 757. *Hull.* 236. *Dicks. Dr. Pl.* 90. *H. Sicc. fasc.* 7. 19.

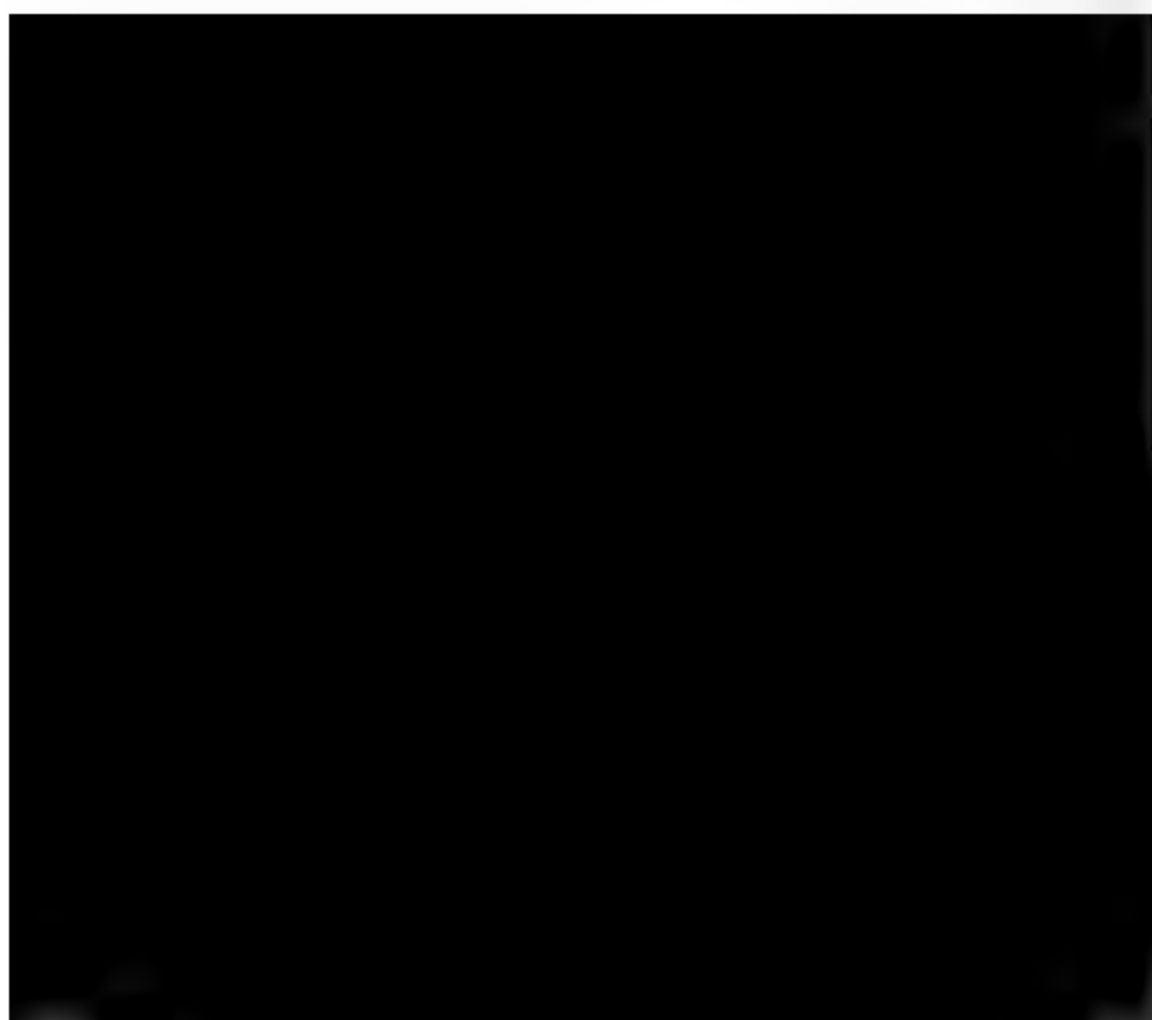
*Selaginoides foliis spinosis*. *Raii Syn.* 106. *Dill. Musc.* 460. t. 68.

**BLACK** boggy spots watered with small alpine rills, in the most mountainous parts of Great Britain, produce this rare species of Club-moss, which ripens its fruit in August and September. We have gathered it on the tops of hills in Westmoreland and Scotland, and have received it from near Middleton in Teesdale, by favour of the Rev. Mr. Harriman, Mr. Oliver and Mr. Robson.

The roots are small, fibrous and perennial. Stems much branched, spreading, weak and slender below; the branches erect, leafy, cylindrical, obtuse; those which bear fructification longer and stouter than the others. Leaves of a bright grass green, shining, imbricated, lanceolate, fringed with minute teeth: those in whose bosoms the fruit is lodged are larger, yellowish, and more spreading. The capsules differ a little from the rest of the genus, being rounder, and containing each four round white large seeds, to whose shape as they stand, one on the other three, the valves of the capsule exactly conform. In the upper part of each spike Mr. Sowerby has found kidney-shaped capsules full of fine dust, like the fruit of the other species, which might be taken for antheræ, were it not contrary to all analogy in this tribe. We rather suppose them to be young or abortive fruit.



*Ap. 1. 180. P. 11. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.*





LYCOPODIUM inundatum.

*Marsh Club-moss.*

---

CRYPTOGAMIA *Miscellanea.*

**GEN. CHAR.** *Capsules* axillary, solitary, naked, kidney-shaped, of two elastic valves and one cell. *Seeds* numerous, minute.

**SPEC. CHAR.** Leaves scattered, entire. Spikes terminal, leafy.

**SYN.** *Lycopodium inundatum.* *Linn. Sp. Pl.* 1565.  
*Huds. Fl. An.* 463. *Witb. Bot. Arr.* v. 3. 69.  
*Relb. Cant.* 393.

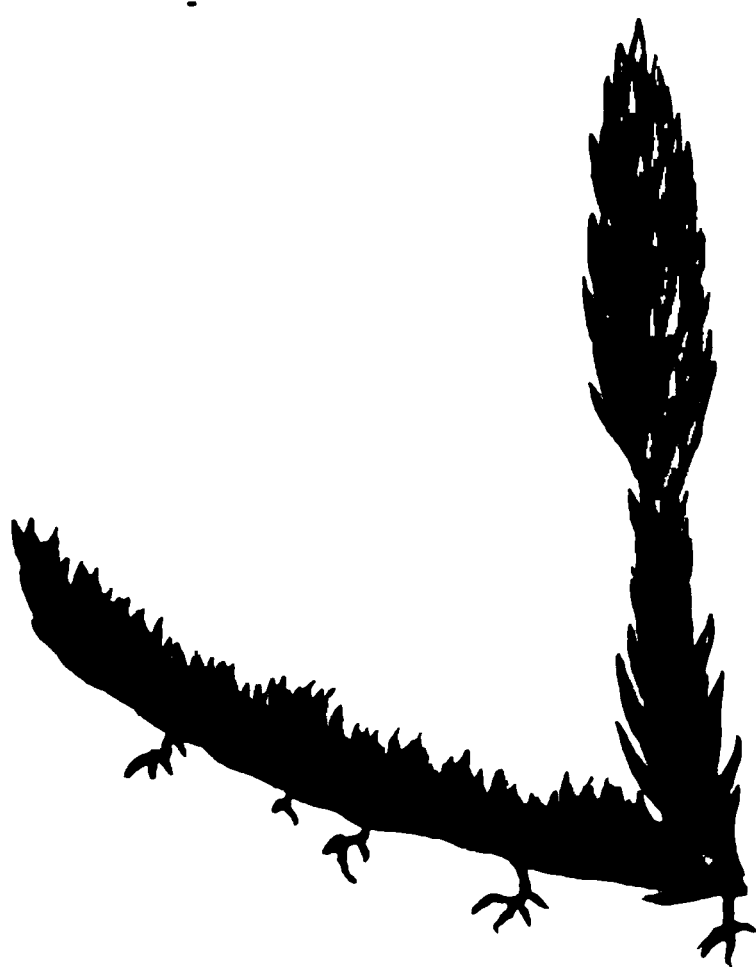
*L. palustre repens, clava singulari.* *Dill. Musc.* 452.  
*t.* 62. *f.* 7.

*Muscus terrestris repens, clavis singularibus foliosis erectis.* *Raii Syn.* 108.

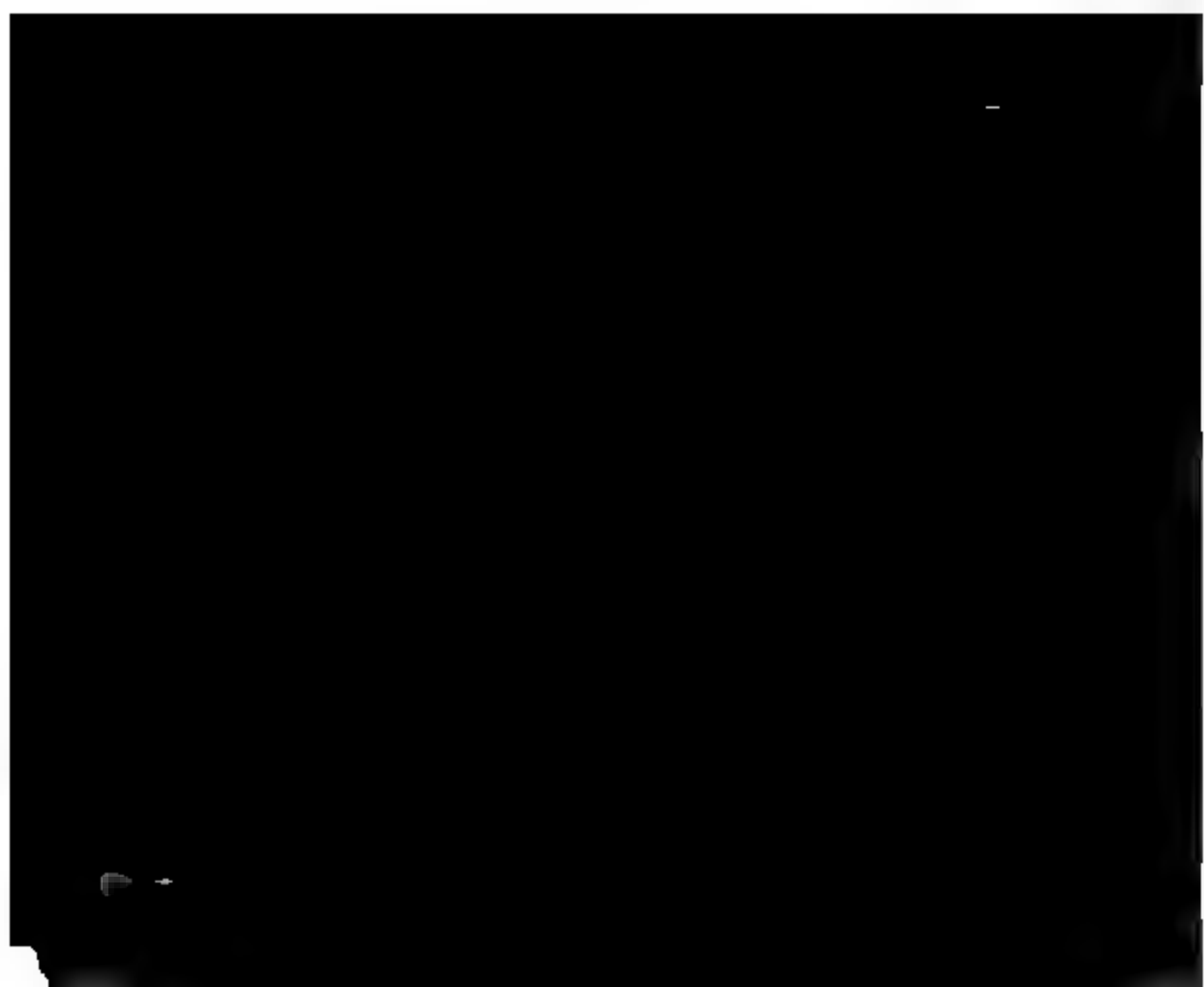
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ONE of our less common species of Club-moss. It may however be met with on the wet part of turfy bogs, especially on a fine Lottan, as Bagshot Heath, and St. Faith's moss.





2







LYCOPODIUM Selago.

*Fir Club-moss.*

---

CRYPTOGAMIA *Miscellaneous.*

GEN. CHAR. *Capsules* axillary, solitary, naked, kidney-shaped, of two elastic valves and one cell. *Seeds* numerous, minute.

SPEC. CHAR. Leaves scattered, in eight series. *Stems* forked, erect, branches equal at the top. *Flowers* scattered.

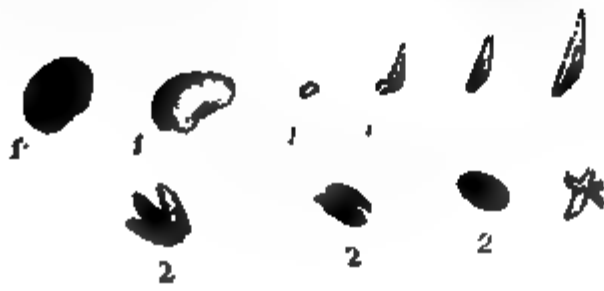
SYN. *Lycopodium Selago.* *Linn. Sp. Pl.* 1565.  
*Huds. Fl. An.* 463. *Witb. Bot. Arr.* v. 3. 70.  
*Sibth. Oxon.* 265.

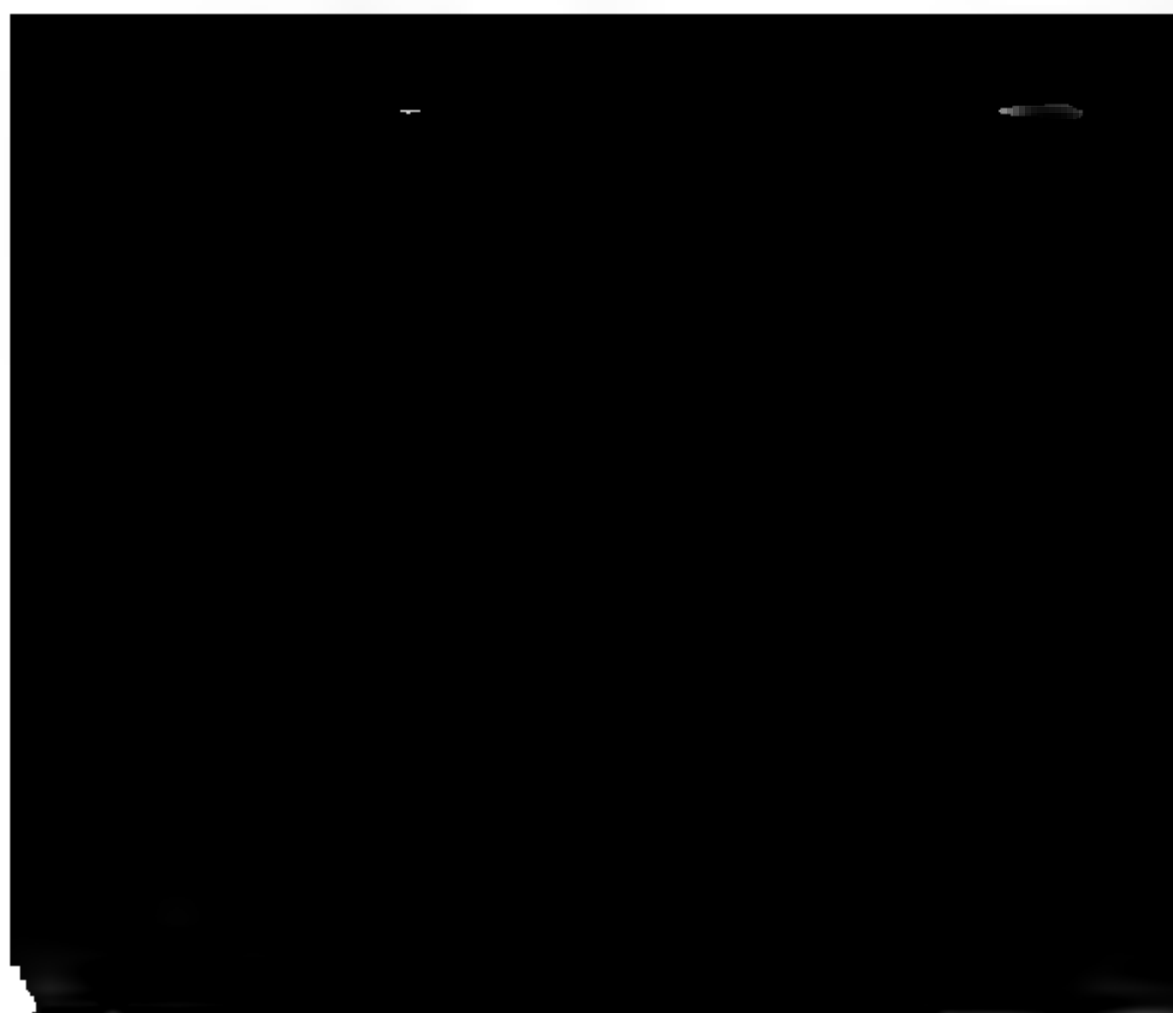
*Selago foliis et facie Abietis.* *Raii Syn.* 106.

*S. vulgaris, Abietis rubræ facie.* *Dill. Musc.* 435.  
*t.* 56. *f.* 1.

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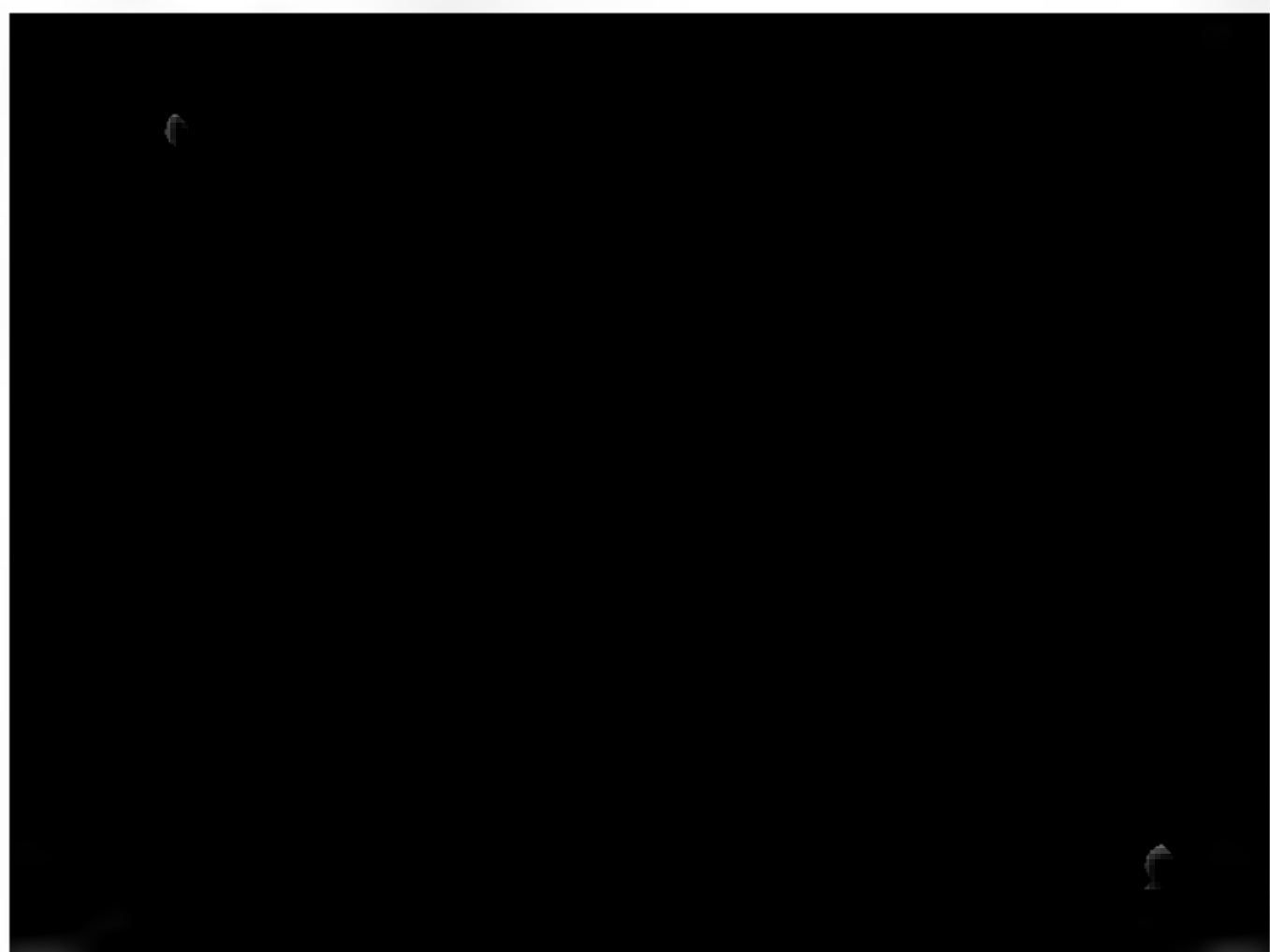
THIS kind of Club-moss is by far less common than that we have already figured, *t.* 224, except about the clefts of rocks in mountainous woods, and on heaths in Wales and the north of England, where it abounds; and it has even been found







W. 10





[ 1727 ]

## LYCOPODIUM annotinum.

*Interrupted Club-moss.*

## CRYPTOGAMIA Filices.

GEN. CHAR. *Capsules* axillary, solitary, of 2 valves, naked, somewhat kidney-shaped, compressed.

SPEC. CHAR. Leaves scattered, slightly serrated, naked-pointed, spreading in five rows; the floral ones short and broad. Flowering-branches annually proliferous at the summit.

SYN. *Lycopodium annotinum.* Linn. *Sp. Pl.* 1566. *Sm. Fl. Brit.* 1111. *Huds.* 464. *With.* 759. *Hull.* 236. *Lightf.* 689. *Ehrh. Crypt.* 62.

*L. elatius juniperinum*, *clavis singularibus*, *sine pediculis.* *Dill. Musc.* 455. *t.* 63. *f.* 9. *Raii Syn.* 107.

A NATIVE of the Scottish and Welch mountains, but it is the least general of our alpine species of *Lycopodium*.

The plant is perennial and evergreen, bearing fructification in the summer. Stems creeping, leafy, rigid and tough; their flowering branches erect, forked, a span high, extending themselves annually at the summit, being proliferous in the sense used by Linnæus in *Philosophia Botanica*, p. 40. A contraction in the size of the leaves at the base of each annual shoot, gives the whole branch a jointed appearance characteristic of the species. The leaves are irregularly placed, but crowded, spreading in 5 directions; their form lanceolate, flat, obscurely serrated, sharp, but without any hair at the point; the floral ones are dilated, shortened, membranous, undulated, yellowish, closely imbricated, forming an obtuse spike. Capsules kidney-shaped.—Whether the whole spike is deciduous, or whether its main stalk remains, and bears leaves the year after flowering, we have no means of determining without an inspection of the growing plant in autumn, but we are inclined to believe the latter.

1737



Apr 2 1882 Public-Ed Ho Jo ' Society London



LYCOPODIUM alpinum.

*Alpine Club-moss.*

CRYPTOGAMIA *Miscellanea.*

GEN. CHAR. *Capsules* axillary, solitary, naked, kidney-shaped, of two elastic valves and one cell. *Seeds* numerous, minute.

SPEC. CHAR. Leaves acute, imbricated in four rows. Shoots erect, cloven. Spikes sessile, cylindrical.

SYN. *Lycopodium alpinum.* *Linn. Sp. Pl.* 1567. *Huds. Fl. An.* 464. *Witb. Bot. Arr.* v. 3. 70. *Dicks. Dr. Plants,* 46.

L. *Sabinæ facie.* *Raii Syn.* 108. *Dill. Musc.* 445-t. 58. f. 2.

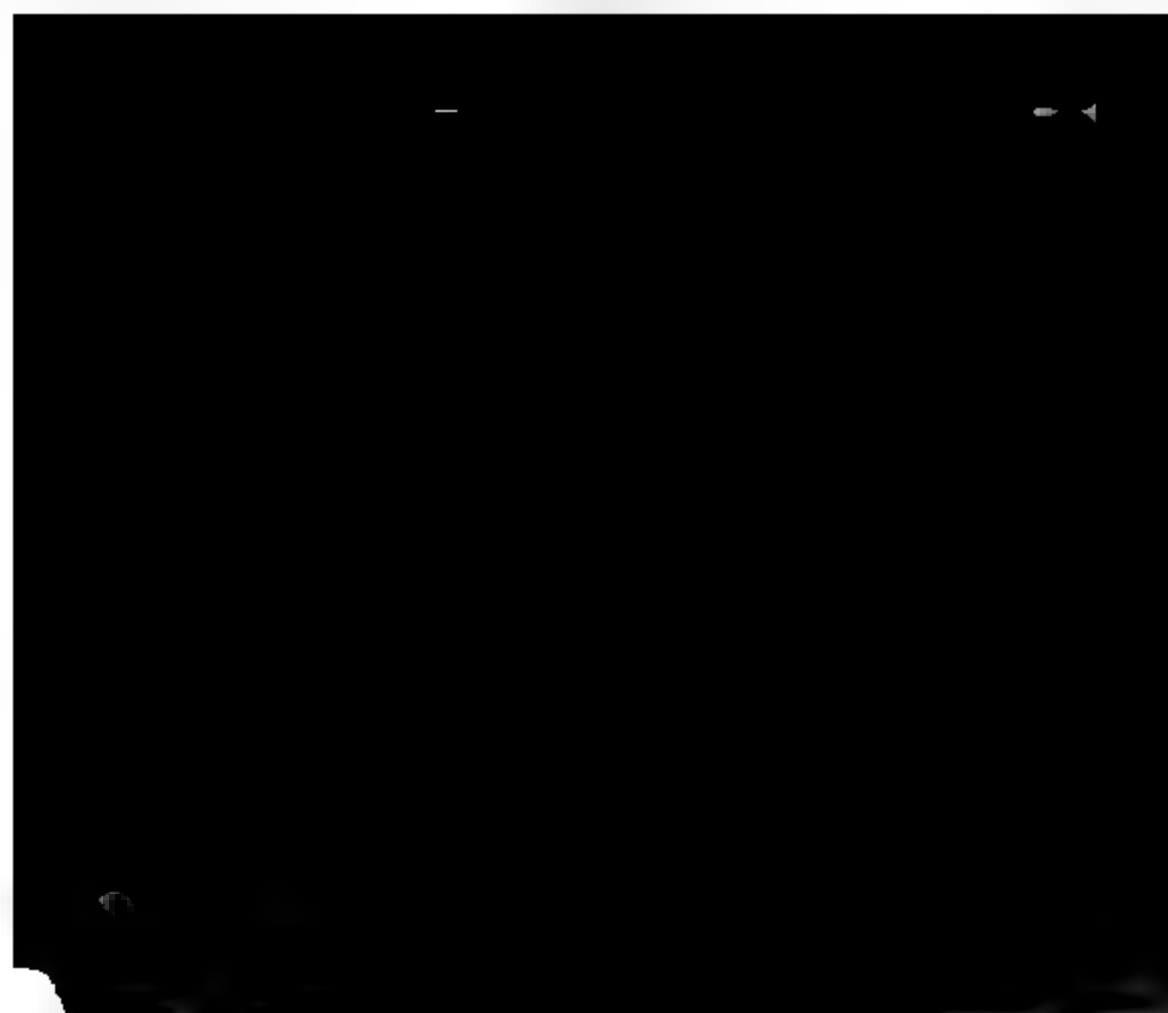
AN inhabitant of several high mountains of the north of England, Scotland and Wales, communicated to us by Mr. Robson of Darlington.

The stems are round, leafy, strong and woody, prostrate,





Fig. 1. 2. 3.





POLYPODIUM vulgare.

Common Polypody.

CRYPTOGAMIA Filices, annulatæ.

GEN. CHAR. Fructifications scattered, in roundish dots not marginal. Involucrum none.

SPEC. CHAR. Frond pinnatifid: lobes oblong, somewhat serrated, obtuse. Root scaly.

SYN. Polypodium vulgare. Linn. Sp. Pl. 1504. Hudf. 455. With. 773. Hull. 236. Relb. 409. Sibth. 269. Abbot. 226. Curt. Lond. fasc. 1. 68. Woodv. Suppl. 1. 271. Bolt. Fil. 3. 18.

Polypodium. Raii Syn. 117.

VERY frequent on the tops of walls, old thatched roofs, shady banks, and the mossy trunks of rotten trees. The fructification is plentiful from the beginning of summer till the plants are destroyed in the course of the winter.

Root perennial, creeping, twisted, thickly clothed with lanceolate brown shining scales; its fibres woolly, of a shining brown. Fronds from 6 to 12 inches high, erect, stalked lanceolate, acute, deeply pinnatifid, smooth; the lobes linear oblong, bluntish, sometimes entire, but most generally crenate or serrated, rarely lobed. Spots arranged in a simple series on each side the rib of each lobe, at nearly an equal distance between that and the edge, round, of a yellow brown convex, larger than in most ferns, perfectly naked or destitute of an involucrum. Every spot consists of numerous stalked round pale capsules, each encompassed with a brownish jointed ring. Tournefort most unaccountably denies the existence of this ring; and Adanson, though a professed reformer, follows him.

We now agree with Dr. Swartz in separating from this genus of *Polypodium* such species as have an involucrum, by the name of *Aspidium*. Of the ferns already figured in this work, t. 1018 and 1019 belong to the latter genus, and t. 618 to the former.

The medical virtues of the Common Polypody are not enough to make it worth inquiring whether that of the oak, or that of any wall or cottage, be most endowed with them.

*P. cambricum* is a barren laciniated variety of this.









[ 2023 ]

**POLYPODIUM hyperboreum.**  
*Hairy Alpine Polypody.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* none.

**SPEC. CHAR.** Frond lanceolate, bluntish, pinnated: leaflets heart-shaped, pinnatifid, hairy on both sides: lobes rounded, waved.

**SYN.** *Polypodium hyperboreum.* Sw. *Fil.* 39.

*P. arvonicum.* With. 774. Sm. *Fl. Brit.* 1115. Hull. 238. Syn. 191.

*P. ilvense.* With. 774. Hull. 237.

*Acrostichum hyperboreum.* Liljeb. in *Stochh. Tr.* for 1793. 201. t. 8.

*A. ilvense.* Huds. 451. Dicks. *H. Sicc. fasc.* 8. 17; but not of Linnæus.

*A. alpinum.* Bolt. *Fil.* 76. t. 42.

*Filix alpina, pedicularis rubræ foliis subtus villosis.* Raii *Syn.* 118.

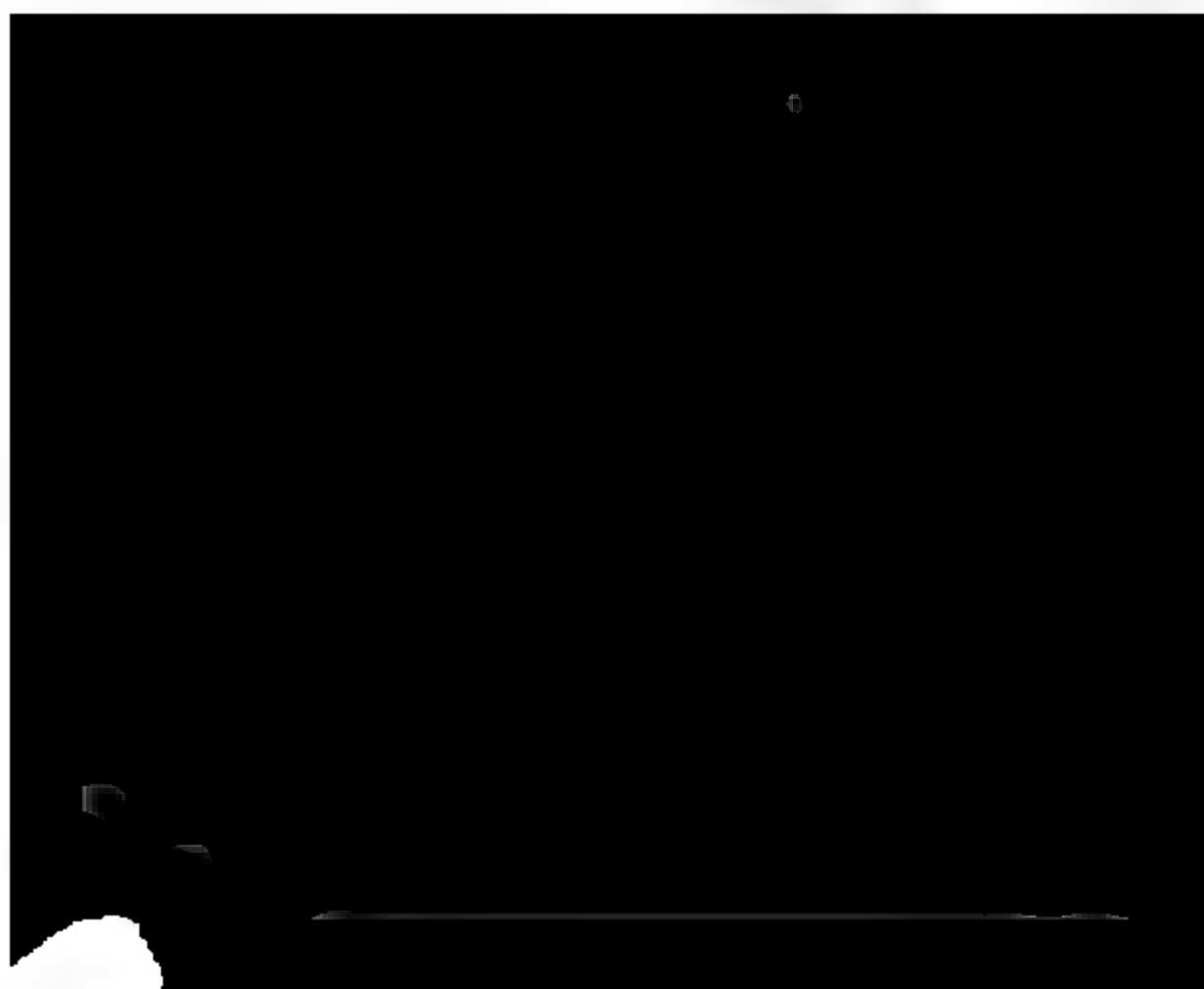
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**SENT** from Ben Lawers by Mr. G. Don, who informs us it is rare in Scotland, growing out of the fissures of alpine rocks, and often not above an inch high. Mr. Dickson gathered it on the same mountain. But the place where it was originally observed in Ray's time, and still grows, is on a moist black rock on Snowden, almost at the top of the point called Clogwyn y Garnedd, looking North West. It is in perfection in July.

The root is black and tufted. Fronds from 1 to 3 inches high, linear-lanceolate, bluntish, clothed with tawny hairs, and composed of numerous, nearly opposite, sessile, short, heart-shaped, rounded, pinnatifid leaflets, whose segments are rounded and waved, without any terminal prickles or bristles. Masses of capsules red brown, hairy, numerous, at length often confluent. This is very distinct from the real *Acrostichum ilvense*. Withering, who describes it twice over, has given the name adopted in *Fl. Brit.*, but although Mr. Liljeb. be wrong as to the genus, we gladly concur with Professor Swartz in preferring his of *hyperboreum*, as of a prior date and far more eligible in itself.



*Collected by J. L. L. L. L.*





POLYPODIUM Phegopteris.

*Pale Mountain Polypody.*

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* none.

SPEC. CHAR. Frond pinnated: leaflets lanceolate, pointed, pinnatifid, united at their base; the lower pair reflexed.

SYN. Polypodium Phegopteris. Linn. Sp. Pl. 1550. Sm. Fl. Brit. 1116. Huds. 456. With. 775. Hull. 238. Lightf. 669. Winch. v. 1. 95. Bolt. Fil. 36. t. 20. Ehrh. Crypt. 131.

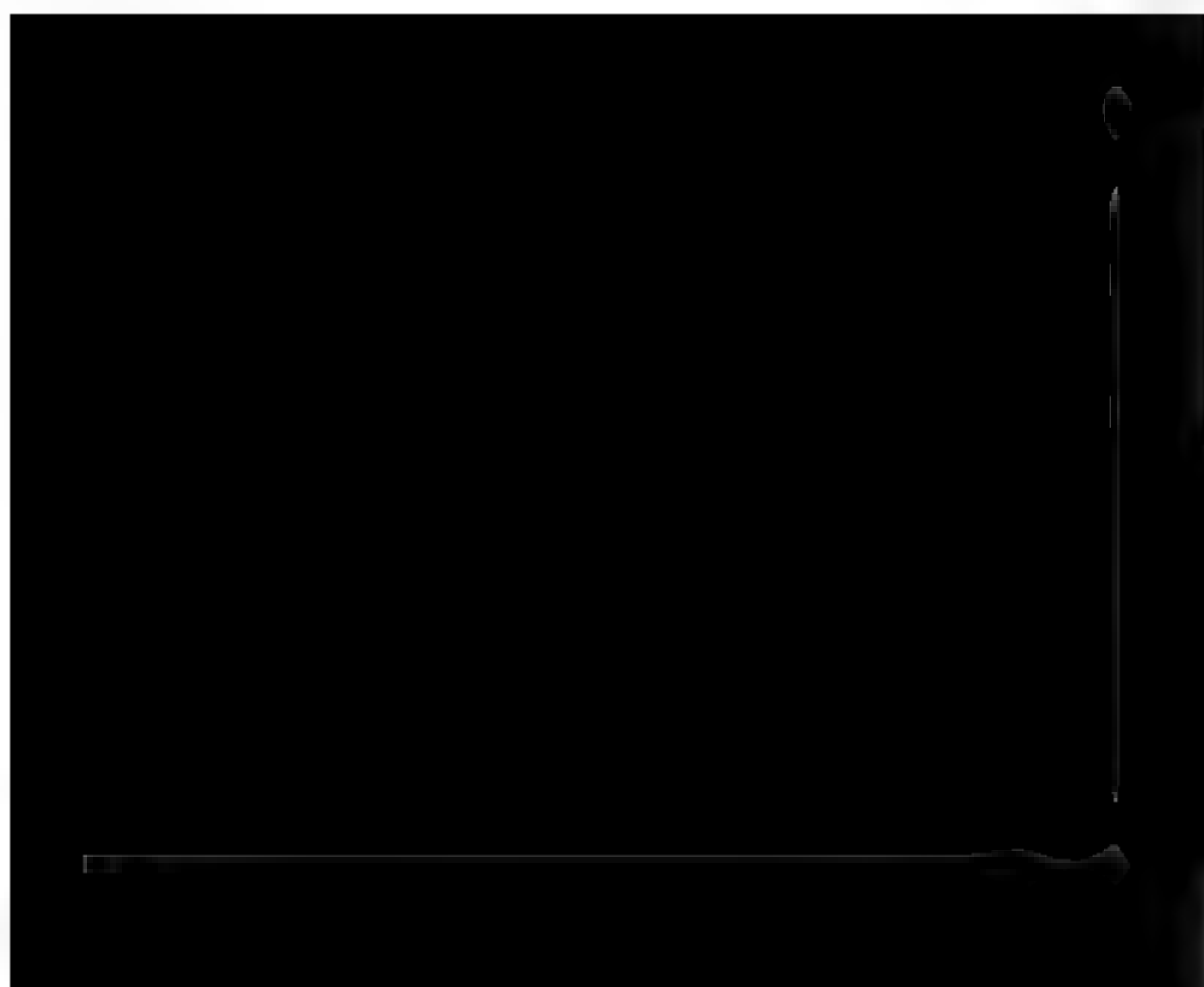
P. n. 1698. Hall. Hist. v. 3. 12.

Filix minor britannica, pediculo pallidior, alis inferioribus deorsum spectantibus. Dill. in Raii Syn. 122.

STONY rather moist places, on mountains in the south of Scotland and north of England, produce this delicate fern; but it is certainly not, as its Greek specific name imports, a native of our Beech woods, at least not of those of the midland counties. We have gathered it in Westmoreland, not only in the shade, but sometimes on open stony moors, where it cannot fail to attract the notice of a botanist by its upright position, pale delicate aspect, whitish stalk, and especially the dependent posture of the two lowermost leaflets or wings. Very rarely it grows in considerable patches, more frequently scattered, having a creeping root. Each plant is about a foot, or more, in height, with a very long, slender, naked, smooth, brittle stalk. Principal pinnatifid leaflets about ten pair, not exactly opposite, though sessile and slightly united at their base, and yet not decurrent. They join about as many simple, gradually shorter, and finally entire ones, above them, surmounted by a taper point. All are fringed and besprinkled with pale soft hairs on both sides, which are often clustered, somewhat stellate, on the rib at the back. The capsules form little round naked yellowish dots, about the lower part of the edges of the segments.



*Adiantum species*







POLYPODIUM Dryopteris.

*Three-branched Polypody.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fruifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond three-branched: branches bipinnate, the lobes bluntish and toothed.

SYN. Polypodium Dryopteris. *Linn. Sp. Pl.* 1555.  
*Huds.* 460. *Witb.* 780. *Hull.* 240. *Dicks. Dr. Pl.* 16.  
*Filix ramosa minor. Raii Syn.* 125.

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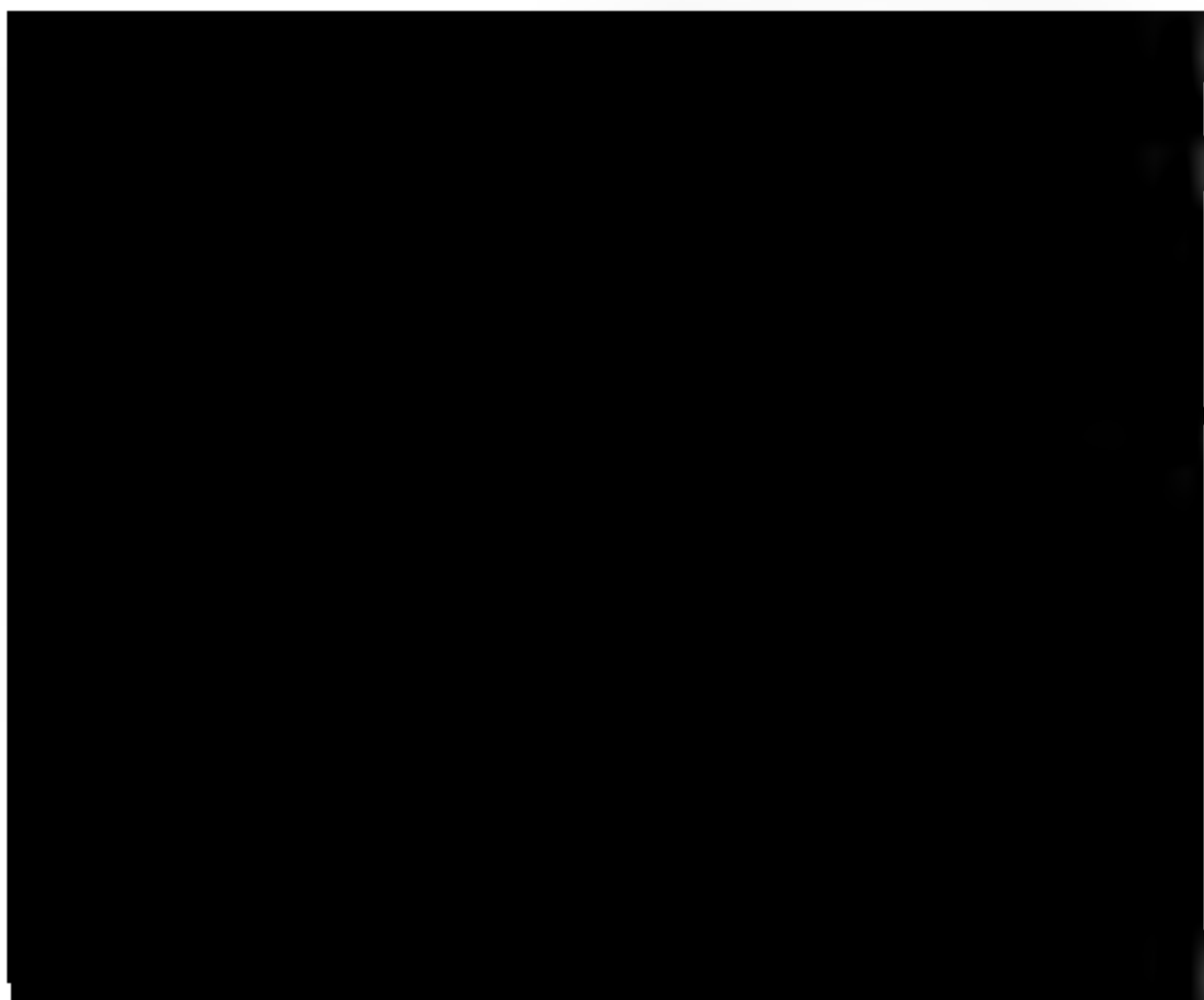
SENT from Staffordshire by the Rev. Thomas Gisborne, the same gentleman to whom we were obliged for *Epimedium alpinum*. This elegant fern is found only in stony parts of the more mountainous counties. The variety we have here figured is



116



c 3



1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

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1899

1900

1901

1902

1903

1904

1905

1906

1907

1908

[ 1525 ]

POLYPODIUM calcareum.  
*Rigid Three-branched Polypody.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* none.

SPEC. CHAR. Frond three-branched: branches bipinnate, erect, somewhat rigid, the lobes bluntish and slightly notched. Dots of seeds confluent.

SYN. *Polypodium calcareum*. Sm. *Fl. Brit.* 1117.

*P. Dryopteris*. Dicks. *Dr. Pl.* 16. Bolt. *Fil.* 53. t. 1.

*Dryopteris Tragi*. Ger. *em.* 1135.

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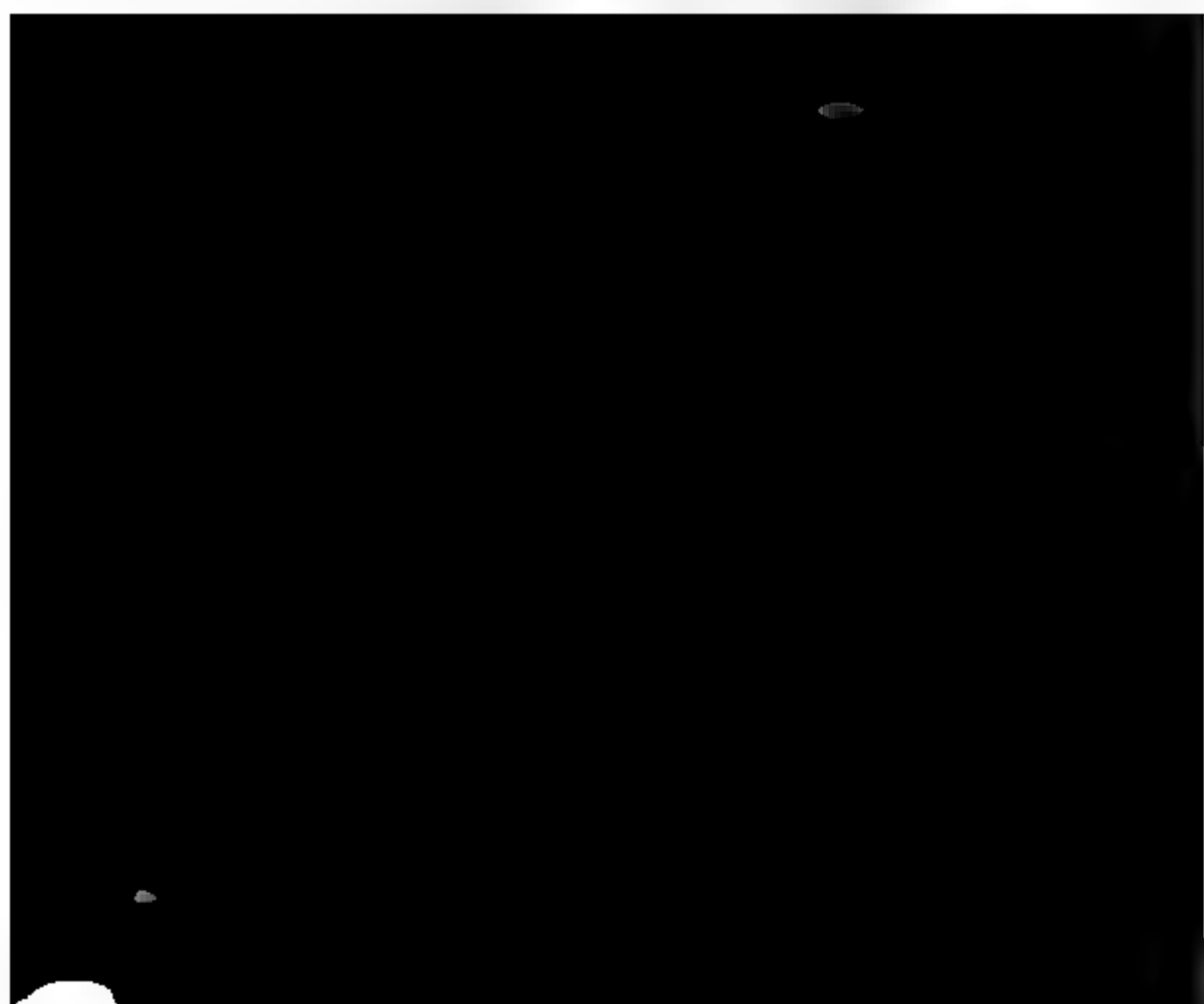
GATHERED on the 27th of last June at Matlock bath, Derbyshire. It grows copiously among grass and bushes on the crumbling calcareous stone, or *tufa*, deposited, in the lapse of ages, by the Matlock water, and in removing a large bed of which, before Saxton's Lodging-house, the skeleton of a large animal of the Deer kind was lately found. See Pennant's *Brit. Zool.* ed. 4. v. 1. 52.

I never observed this species in any other place, nor was I for some time convinced of its being distinct from *P. Dryopteris* figured in our 9th vol. t. 616. I am still uncertain whether the synonyms of any of the more accurate cryptogamists of Germany belong to it.

The root is, of course, perennial, and creeps like that of *P. Dryopteris*, but is thicker and commonly shorter. The base of the stem is scaly, not smooth, and the whole frond is firmer and more rigid, the three principal branches generally smaller, nearly erect, and by no means flaccid or loosely pendent. The young capsules are pale, without any involucre; when ripe they become brown or black, and run together, covering the whole back of the leaf, whereas those of *P. Dryopteris* remain in distinct dots.



1861. *Adiantum* sp. *Adiantum* *Adiantum*







## POLYPODIUM Lonchitis.

*Rough Alpine Polypody.*

## CRYPTOGAMIA Filices.

GEN. CHAR. *Fruclifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond simply pinnate; leaflets crescent-shaped, bent downwards, bristly-ferrated. Stalks scaly.

SYN. Polypodium Lonchitis. *Linn. Sp. Pl.* 1548.  
*Huds.* 455. *Wurb.* 773. *Hull.* 237. *Lightf.* 668.  
 Lonchitis aspera major. *Raii Syn.* 118.

A NATIVE of high rocky mountains, sent us from Durham by the Rev. Mr. Harriman. It has also been found in Wales and Scotland, but is confined to alpine situations.

The fronds grow in tufts, upright, 8 or 10 inches high, of a narrow lanceolate figure, rigid and harsh, composed of numerous alternate sessile simple *pinnæ* or leaflets, which are bent a little downwards, and are of a lanceolate somewhat crescent-shaped figure, acute, fringed with bristly ferratures, and having a projecting angle at their base on the upper side, while the under is sloped or cut away. About half the leaflets, and those the uppermost, are thickly set with round spots of fructification in a single line on each side of the rib, each spot covered with a round truly umbilicated involucrum. One or two smaller dots sometimes stand on the projecting angle of the leaflet.

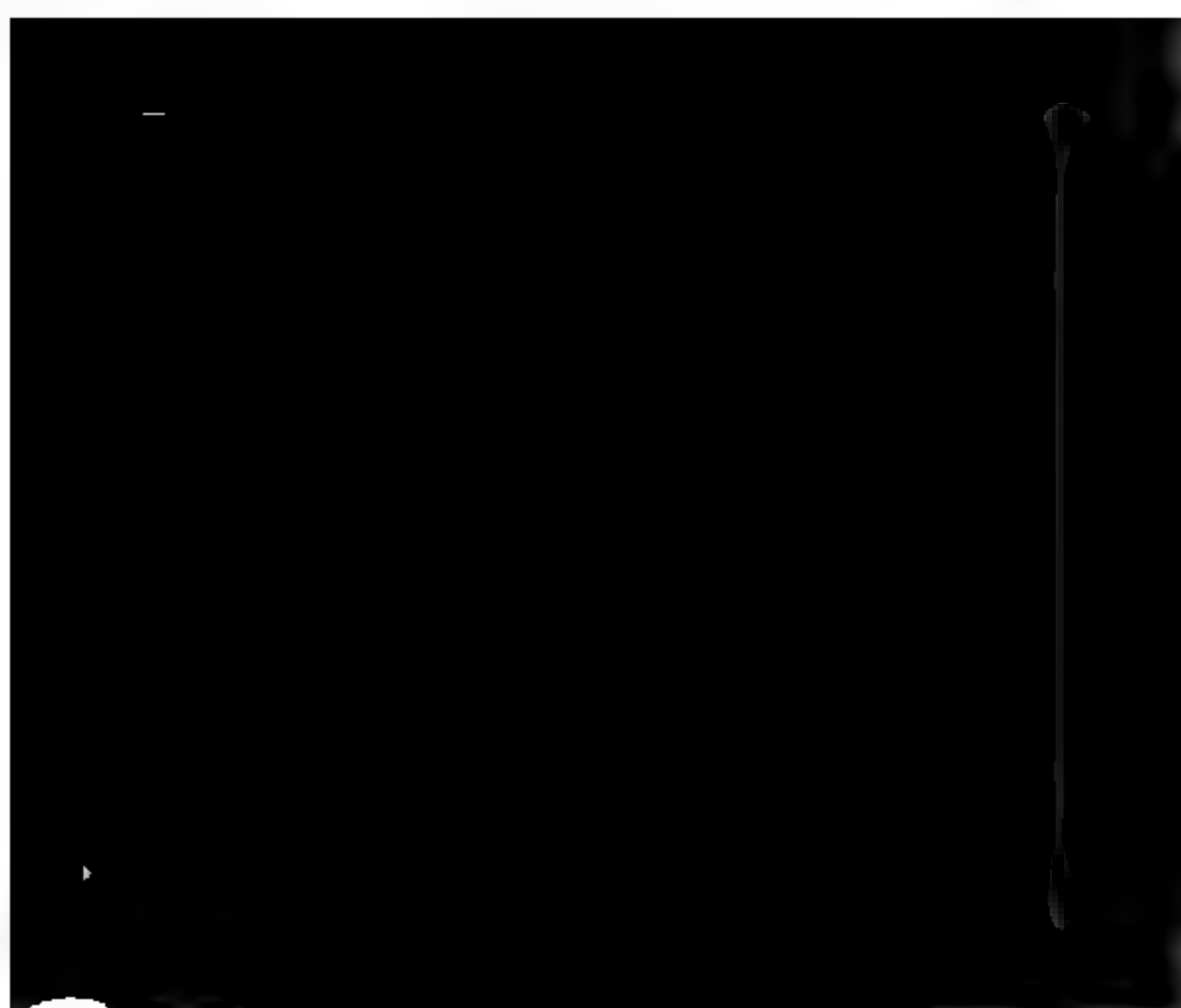
This has often been supposed a mere variety of *P. aculeatum*, which, when transplanted from its native woods into an open garden, often dwindles away to the size of *P. Lonchitis*, see *Pluk. Phyt.* 1. 180. f. 3, as Mr. W. Brunton of Rippon has proved by experiment. The *Lonchitis* however has the leaflets much less inclined to be lobed, and never auricled; its spots of fructification are thrice as large as in the other, and the plants are manifestly different.

747











[ 2024 ]

## ASPIDIUM fontanum.

*Smooth Rock Shield-fern.*

## CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond linear-lanceolate, smooth, mostly bipinnate; leaflets alternate, rounded; their segments very sharply toothed. Stalks winged. *Involucrum* oblong.

SYN. *Aspidium fontanum*. Sw. *Fil.* 57.

*Polypodium fontanum*. Linn. *Sp. Pl.* 1550. Sm. *Fl. Brit.* 1114. Huds. 456. With. 777. Hull. 238. *Vulars Dauph.* v. 3. 849.

P. n. 1706. Hull. *Hist.* v. 3. 15.

*Adiantum filicinum durius crispum minimum*. Barret. *lc.* t. 432. f. 1.

WE have at length ascertained this fern to our satisfaction, and hasten to correct the errors respecting it in *Fl. Brit.* into which we were led by Linnæus having confounded with it a specimen that we now believe to be our *Polypodium hyperboreum*, t. 2023. The above synonyms are certainly correct, as, we trust, is the following information.

Mr. Hudson gathered this plant above Wybourn in Westmoreland, and received it from Agmondesham, or Amersham, church, Bucks. We have a specimen gathered by the late Mr. Aiton in the spot last mentioned, though the plant is said to be found there no longer; but this ascertains the species. The character and description of Linnæus agree with it, though not with the mistaken specimen above mentioned, whose capsules are intermixed with hairs, and which we had in view while writing *Fl. Brit.* The tufted root bears many fronds, from 2 to 6 inches high, rigid, smooth, of a somewhat glaucous green, linear-lanceolate, composed of numerous, alternate, pinnate or pinnatifid leaflets, whose lobes are very sharply toothed and slightly spinous, and all the stalks are winged. Dots at the midrib of each lobe, round, which makes the plant an *Aspidium*, though the singularly white involucrum is lateral and oblong, approaching to the nature of a *Durea*. There seems moreover some general affinity between the present fern and *Asplenium lanceolatum*, t. 240. One of our specimens was communicated by Mr. Dickson. We have seen no living ones.



*Adiantum punctatum* L.



1

1





POLYPODIUM Thelypteris.

*Marsh Polypody.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond pinnate; leaflets pinnatifid, somewhat crenate, separate but crossing each other at the base. Dots confluent.

SYN. Polypodium Thelypteris. *Linn. Mant.* 505. *Witb.* 776. *Hull.* 239. *Abbot.* 227. *Dickf. H. Sicc. fasc.* 6. 15.

*Acrostichum Thelypteris.* *Linn. Sp. Pl.* 1528. *Bolt. Fil.* 78. t. 43, 44.

*Filix minor palustris repens.* *Raii Syn.* 122.

---

THIS Fern is always found in wet spongy marshes and bogs, but not frequently. Mr. Pitchford discovered it long ago on St. Faith's bogs near Norwich, and Mr. Turner lately at Lound near Yarmouth. It is also mentioned as growing in Bedfordshire, Yorkshire, and Scotland.

The root is long, slender, and creeps horizontally, pro-







**POLYPODIUM** *Oreopteris.*  
*Heath Polypody.*

---

**CRYPTOGAMIA** *Filices.*

**GEN. CHAR.** *Frustrifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

**SPEC. CHAR.** Frond pinnate; leaflets pinnatifid, entire, sprinkled beneath with resinous glands. Dots marginal, confluent.

**SYN.** *Polypodium Oreopteris.* *Dicks. Tr. of Linn. Soc. v. 1. 181. H. Sicc. fusc. 1. 18. Willd. 775. Hull. 238. Sibth. 270.*

*P. Thelypteris.* *Hudf. 457. Bolt. Fil. 40. t. 22. f. 1, 2. Hedw. Theor. 44. t. 6.*

*Filicis maris vulgaris varietas. Raii Syn. 122.*

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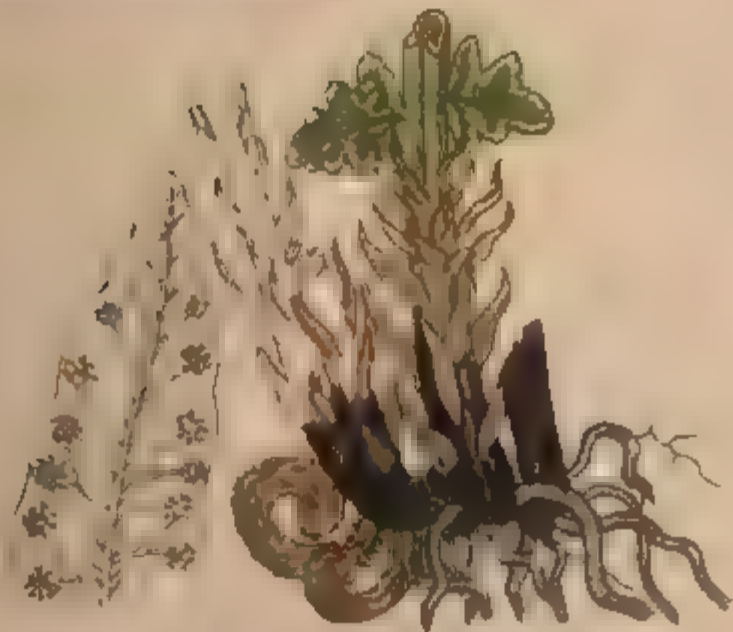
**THE** Polypody here represented, much more common than the last, for which it has often been taken, grows in mountainous, heathy, or dry woody places, most plentifully in Scotland, Wales, and the north of England, though Mr. Lambert has found it in Hampshire. We received it from the Rev. Mr.



1019



6









**ASPIDIUM** Filix mas.  
*Male Shield-fern.*

---

**CRYPTOGAMIA** Filices.

**GEN. CHAR.** *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

**SPEC. CHAR.** Frond bipinnate; leaflets obtuse, serrated. Stalk scaly. *Involucrum* circular.

**SYN.** *Aspidium* Filix mas. *Swartz. Fil.* 38. *Sm. Fl. Brit.* 1121.

*Polypodium* Filix mas. *Linn. Sp. Pl.* 1551. *Huds.* 458. *With.* 775. *Hull.* 238. *Relh.* 411. *Sibth.* 270. *Abbot.* 226. *Bolt. Fil.* 44. t. 24. *Woodw. Med. Bot.* t. 49. *Dicks. H. Sicc. fasc.* 3. 19.

Filix mas vulgaris. *Raii Syn.* 120.

---

**V**ERY common in dry hedge bottoms and other shady places, where as it unrolls its scaly buds in the spring it excites notice by its singularity. When fully grown, and covered with its innumerable spots of future seeds in June and July, it forms



*Adiantum species, from the collection of the British Museum, London*





[ 1949 ]

ASPIDIUM cristatum.

*Lesser Crested Shield-fern.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond nearly bipinnate; leaflets ovate, obtuse, with shallow lateral serratures and sharp little terminal teeth. Common stalk scaly. *Involucrum* nearly circular.

SYN. *Aspidium cristatum*. Swartz. *Fil.* 52.

*Polypodium cristatum*. Linn. *Sp. Pl.* 1551.

*P. Callipteris*. Ehrh. *Crypt.* 53.

---

GATHERED in hedge rows, on Apse heath and near Ryde, in the isle of Wight, by the Rev. G. R. Leathes. We have a specimen gathered in 1606 by the Rev. R. B. Francis near Holt, Norfolk, and have heard of others from Scotland, so that this species can no longer be refused a place in the *Flora Britannica*. Our specimens accord with original ones of Linnæus and Ehrhart, and are very distinct from *A. dilatatum*, t. 1461, long mistaken for the *P. cristatum* of Linnæus.

Root tuberous, somewhat creeping. Fronds 1 or 2 feet high, ovato-lanceolate, acute, pinnate; the leaves either again pinnate, or deeply pinnatifid; leaflets rather alternate, ovate, obtuse, veiny, with wide shallow serratures along their sides, and several broad, sharp, scarcely spinous, little teeth at their summits. The ribs are somewhat zigzag. Dots of capsules tawny, about the upper part of the frond, but on the lower part of each leaflet or segment. *Involucrum* between kidney-shaped and circular. The common stalk is very scaly in the lower part, and more or less so up to the summit. The fronds when drying have a faint sweet scent, unlike the generality of British ferns.

1939



*Adiantum species*



[ 1562 ]

**ASPIDIUM aculeatum.**  
*Common Prickly Shield-fern.*

---

*CRYPTOGAMIA Filices.*

**GEN. CHAR.** *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

**SPEC. CHAR.** Frond bipinnate; leaflets ovate, somewhat crescent-shaped, fringed with spines, hairy beneath. Common stalks scaly.

**SYN.** *Aspidium aculeatum.* Sm. *Fl. Brit.* 1122.

*Polypodium aculeatum.* Linn. *Sp. Pl.* 1552. *Huds.* 459. *With.* 777. *Hull.* 239. *Relh.* 412. *Sibth.* 271. *Abbot.* 227. *Bolt. Fil.* 48. t. 26. *Mill. Illustr.* t. 101.

*Filix mas non ramosa, pinnulis latis auriculatis spinosis.*  
*Raii Syn.* 121. n. 2; also n. 4 and 5.

---

**FREQUENT** in shady stony places, and often in dry hedge bottoms, bearing seed in the summer and autumn.

Root perennial, tufted, large. Fronds numerous, large and handsome, of a dark and blueish green, paler beneath, lanceolate, acute, elegantly and closely bipinnate; their general and partial stalks remarkably scaly. Leaflets mostly alternate, ovate, a little curved into a crescent-shape, sharply serrated, each tooth tipped with a spine: all the leaflets are more or less lobed or dilated at their upper edge near the base, and sometimes the lowermost are pinnatifid. Spots of seeds scattered over the disk, their membranous coverings quite circular, attached by the centre, perfectly entire, not, as in most of the genus, cloven on one side.

The size of the plant is much diminished when it meets with a very dry or barren soil, in which case it approaches *Aspidium Lonchitis* in habit, but is a very distinct species. See t. 797.



*Adiantum species in the mountains of Mexico*



100

100

ASPIDIUM lobatum.

*Close-leaved Prickly Shield-fern.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond bipinnate; leaflets elliptical, somewhat crescent-shaped, fringed with spines, hairy beneath: the foremost of the lowest pair very large. Common stalk scaly.

SYN. *Aspidium lobatum*. Sm. *Fl. Brit.* 1123.

*Polypodium lobatum*. Huds. 459.

*Filix aculeata major*, pinnulis auriculatis crebrioribus, foliis integris angustioribus. Raii *Syn.* 121.

*F. aculeata*, *Lonchitidis æmula nostras*. Pluk. *Phyt.* t. 180. f. 3.

---

SINCE Ray, whose description is excellent, we believe no one has well understood this fern except Mr. Edward Forster, to whom we are obliged for directing our attention particularly to the subject. It has not been observed out of Essex, where it is not uncommon in shady places under hedges. It varies in size, but often equals *A. aculeatum* in the height of its fronds, though their breadth is always less in proportion. The whole frond is more firm and rigid, of a paler and more shining green. The leaflets are rather elliptical than ovate, crowded, less cut or lobed, but more remarkable for the great size of the foremost or uppermost one at the base of each subdivision of the frond, which often extends its point beyond the stalk above it.

1503



*Tab. 1. 1806. Published by T. A. Smith, London*







[ 1459 ]

ASPIDIUM *Filix foemina.*  
*Female Shield-fern.*

---

CRYPTOGAMIA *Filices.*

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond bipinnate; leaflets pinnatifid, serrated, pointless. Stalk smooth. *Involucrum* kidney-shaped.

SYN. *Aspidium Filix foemina.* Swartz. *Fil.* 41. *Sm. Fl. Brit.* 1124.

*Polypodium Filix foemina.* Linn. *Sp. Pl.* 1551. *Huds.* 458. *With.* 778. *Hull.* 239. *Relh.* 411. *Sibth.* 271. *Abbot.* 226. *Bolt. Fil.* 46. t. 25. *Dicks. H. Sicc. fasc.* 5. 18.

*Filix mas non ramosa*, pinnulis angustis raris, profundè dentatis. *Raii Syn.* 121.

---

ALMOST as common as the last, but in a different kind of situation, growing in marshy shady places. It is in perfection about July.

The root is large and tufted, bearing many very handsome fronds 18 or 20 inches high, of a broad acute lanceolate form, and a full grass-green colour, smooth in all their parts. Their stalk is slender, pale, and very smooth. Leaflets (or primary divisions) alternate, lanceolate, pointed, subdivided into other leaflets, which are elegantly pinnatifid sometimes even pinnate, and obtusely notched, their lobes all destitute of any bristly termination; the upper ones are decurrent. Spots of fructification much smaller than in *A. Filix mas*, and not circular but oblong, or crescent-shaped, the involucrum being kidney-shaped, bursting towards the rib of the leaflet. The name merely alludes to the greater elegance or delicacy of this species compared with the last.







[ 2199 ]

## ASPIDIUM irriguum.

*Brook Shield-fern.*

## CRYPTOGAMIA Filices.

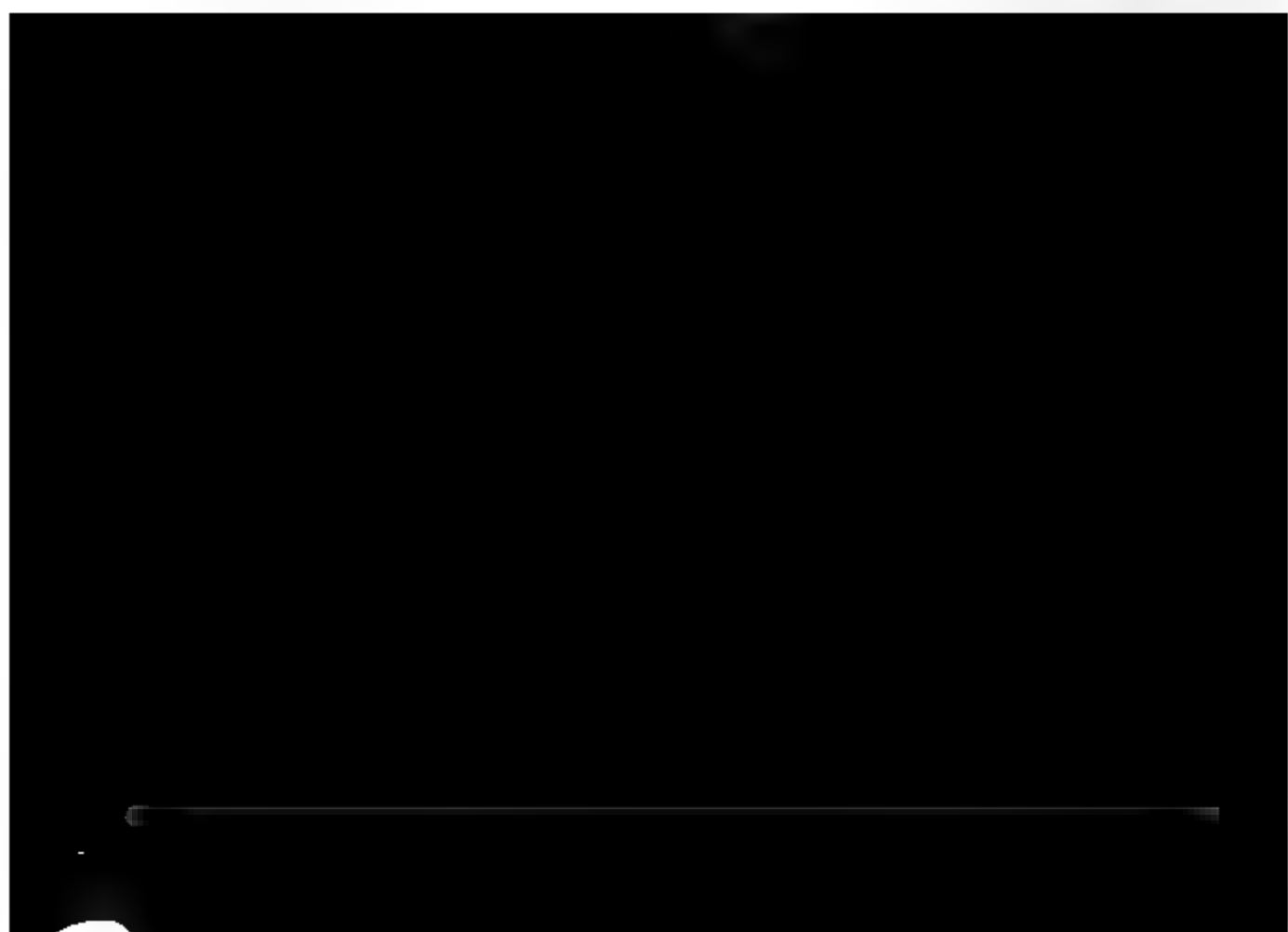
GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond lanceolate. pinnate; leaflets deeply pinnatifid, cut and sharply toothed. Stalk quadrangular. *Involucrum* lateral, short, jagged.

DISCOVERED by T. F. Forster, Esq., about the watery margins of clear springs near Tunbridge wells. Our figure was taken in June, 1810, from a living plant in his garden, not at all changed by cultivation.

We can find no described fern, nor any exotic or British specimen, that accords with this. It agrees in some points with *A. Thelypteris*, (*Polypodium Thelypteris*, t. 1018,) but is much smaller, more tender and delicate, neither has it a creeping root. The main rib is exactly square, and of a delicate transparent green when living, pale brown when dried. Leaflets numerous, alternate, very deeply and copiously pinnatifid, their segments ovate-oblong, sharply cut and toothed, merely connected at the base by a sort of wing from the partial rib. Dots of fructification several about the lower part of each segment, small, round, brown, not reddish. *Involucrum* short and oblong, or somewhat square, very delicate, whitish, jagged or fringed at its edge, affixed laterally to the nerve of each segment, and separating inwards. It is scarcely umbilicated, but rather more approaches to the nature of our *Cyathea fragilis*, t. 1587, and *dentata*, t. 1588; yet as there is some doubt respecting even their genus, and the *involucrum* of the present fern has nothing of a cup shape, we rather refer it, like t. 2024, to *Aspidium*. It does not by any means agree with the character of Bernhardt's *Cystopteris*, Schrad. New Journ. v. 1. fasc. 2. t. 2, founded on *Cyathea fragilis*.









ASPIDIUM spinulosum.  
*Lesser Crested Shield-fern.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond nearly bipinnate; leaflets decurrent, elliptical, serrated or pinnatifid, their segments tipped with little spines. Common stalks smooth. Ribs zigzag.

SYN. *Aspidium spinulosum*. Sm. *Fl. Brit.* 1124.

*Polypodium spinulosum*. Retz. *Prod.* 250. *Fl. Dan.* t. 707. *With.* 778. *Hull.* 239. *Sym.* 191.

P. n. 841. *Muller. Fl. Fridr.* 193. t. 2. f. 2.

*Filix pumila saxatilis altera*. *Pluk. Phyt.* t. 179. f. 5.

---

MR. J. T. Mackay of Dublin gathered this specimen last September in a cavern on Spike Island, near Cove, below Cork, Ireland. Dr. Scott has found the same in the north part of that kingdom. We never saw it before except in Mr. Rose's herbarium. Muller and Plukenet have figured it well, but Dr. Withering first made it known as a British plant. Probably it may have been confounded with the following species.

The root is creeping. Fronds about a foot high, each with a long slender stalk, which is quite smooth except its very base. The primary divisions are so deeply pinnatifid as to be almost pinnate; their lobes elliptical, sharply serrated or pinnatifid, thin and delicate, each incision tipped with a spine. The rib of each pinnula is very much waved or zigzag. Dots of capsules rather small, with a circular covering.



*From a drawing by W. D. Swainson, London*

2





ASPIDIUM dilatatum.  
Great Crested Shield-fern.

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond bipinnate; leaflets deeply pinnatifid, sharply cut, segments tipped with little spines. Common stalks scaly. *Involucrum* circular.

SYN. *Aspidium dilatatum*. Sm. *Fl. Brit.* 1125.

*Polypodium dilatatum*. Hoffm. *Germ.* v. 2. 7.

*P. cristatum*. Huds. 457. With. 778. Hull. 239. Relh. 410. Sibth. 270. Abbot. 226. Bolt. *Fil.* 42. t. 23.

*P.* n. 845. Muller. *Fl. Fridr.* 193. t. 2. f. 4.

*Filix mas ramosa*, *pinnulis dentatis*. Raii *Syn.* 124. *Phuk. Phyt.* t. 181. f. 2.

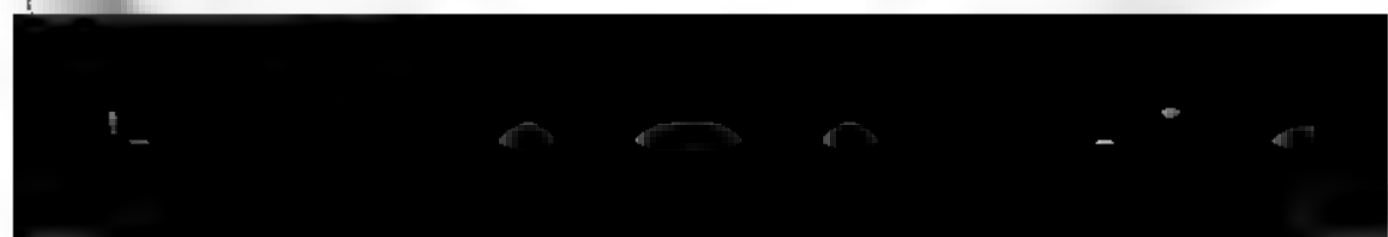
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IN shady moist sandy places, or moist rocky woods, not very unfrequent, producing seeds in July, and varying much in size.

The root is tuberous, scarcely creeping. Fronds from 1 to 3 feet high, broad and spreading, twice or almost thrice pinnate, their common and partial stalks all more or less scaly. Their secondary leaflets are nearly opposite, pinnate, at their base, pinnatifid upwards; the lobes small, oblong, deeply and sharply serrated or cut, their incisions spinous, their ribs less frequently zigzag than in the last. Dots of capsules numerous, distinct, with a circular covering.



*Adiantum species*







ASPIDIUM cristatum.

*Lesser Crested Shield-fern.*

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond nearly bipinnate; leaflets ovate, obtuse, crenate or pinnatifid, with sharp little terminal teeth. Stalk scaly at the base. *Involucrum* nearly circular.

SYN. *Aspidium cristatum*. Swartz. *Fil.* 52.

*Polypodium cristatum*. Linn. *Sp. Pl.* 1551.

*P. Callipteris*. Ehrh. *Crypt.* 53.

HAVING unfortunately been misled to figure a wrong plant under this name in t. 1949, we find it necessary now to exhibit the true one, gathered by the Rev. R. B. Francis in the low boggy parts of the heath between Holt and Hempstead, Norfolk, and to draw up our definition and description afresh.

Root tufted. Fronds pale green, 1 or 2 feet high, linear-lanceolate, the fertile ones, as Mr. Francis observes, remarkably erect, in which the leaves are more alternate than in the barren ones. The leaves (or *pinnæ*) are of moderate length, very deeply pinnatifid, acute; their segments or leaflets close, broad, obtuse, either crenate or slightly pinnatifid, their ends and lobes bearing sharp, scarcely spinous, little teeth. Ribs somewhat zigzag. Dots of capsules blackish when fresh, with a white nearly circular *involucrum*, the whole becoming tawny when dried. They are ranged equally in single rows along each side of every fertile leaflet. Common stalk scaly at its base chiefly.

The Isle of Wight plant, t. 1949, is supposed to be only a variety of *A. Filix mas*, t. 1459, and its sweet scent, which still remains in the dried specimens, to be adventitious. Can this be what Hudson mistook for *Polypodium fragrans*? See the remark at the bottom of our p. 1019.



*Her. 2 12 10. pubescens by J. Kuntze*





ASPLENIUM Trichomanes.

*Common Maidenhair Splcenwort.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fruclif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

SPEC. CHAR. Frond pinnated. Leaflets roundish, crenate.

SYN. Asplenium Trichomanes. *Linn. Sp. Pl.* 1540. *Huds.* 452. *Witb.* 768. *Relb.* 388. *Sibtb.* 268. *Abbot.* 225. *Bolt. Fil. t.* 13. *Woodv. Med. Bot.* 1. 204. *Dicks. H. Sicc. fasc.* 4. 17.

Trichomanes. *Raii Syn.* 119.

---

NOT uncommon on shady rocks, old walls, the north side of churches and similar situations, where its fructification may be found at almost all seasons.

Root tufted, woolly, perennial. Fronds numerous, spreading, lanceolate, consisting of a smooth, dark-brown, polished stalk, bearing many pairs of opposite, roundish, or rather ovate, crenate leaflets, of a deep green; their under side producing 6 or 8 oblong spots of fructification, whose covering membrane opens towards the mid-rib. The numerous capsules consist of two hemispheres bound by an elastic jointed ring, as in most of the *Filices dorsiferae*.

This is a pretty fern, not unworthy of a place on shady rockwork, and about grottos or fountains. Its medical virtues are very doubtful. It has been used as a substitute for the Maidenhair of warmer climates, *Adiantum Capillus Veneris*, from which a syrup is made, perfumed with orange-flowers, and called Syrup of Capillaire. The virtues of even this, as a cure for coughs and colds, are probably owing to the sugar more than to the Maidenhair.









**ASPLENIUM viride.**  
*Green Maidenhair Spleenwort.*

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**CRYPTOGAMIA Ferns.**

**GEN. CHAR.** *Fructif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

**SEED. CHAR.** Frond pinnate; leaflets alternate, roundish-elliptic, crenate. Common stalk flattened beneath.

**SYN.** *Asplenium viride.* *Huds.* 453. *Sm. Fl. Brit.* 1127. *Wüh.* 766. *Hall.* 241. *Dicks. H. Sicc. fasc.* 3. 18. *Lightf.* 663. *Winch. t.* 1. 97. *Bolt. Fil.* 24. t. 14. *Ehrh. Crypt.* 71.

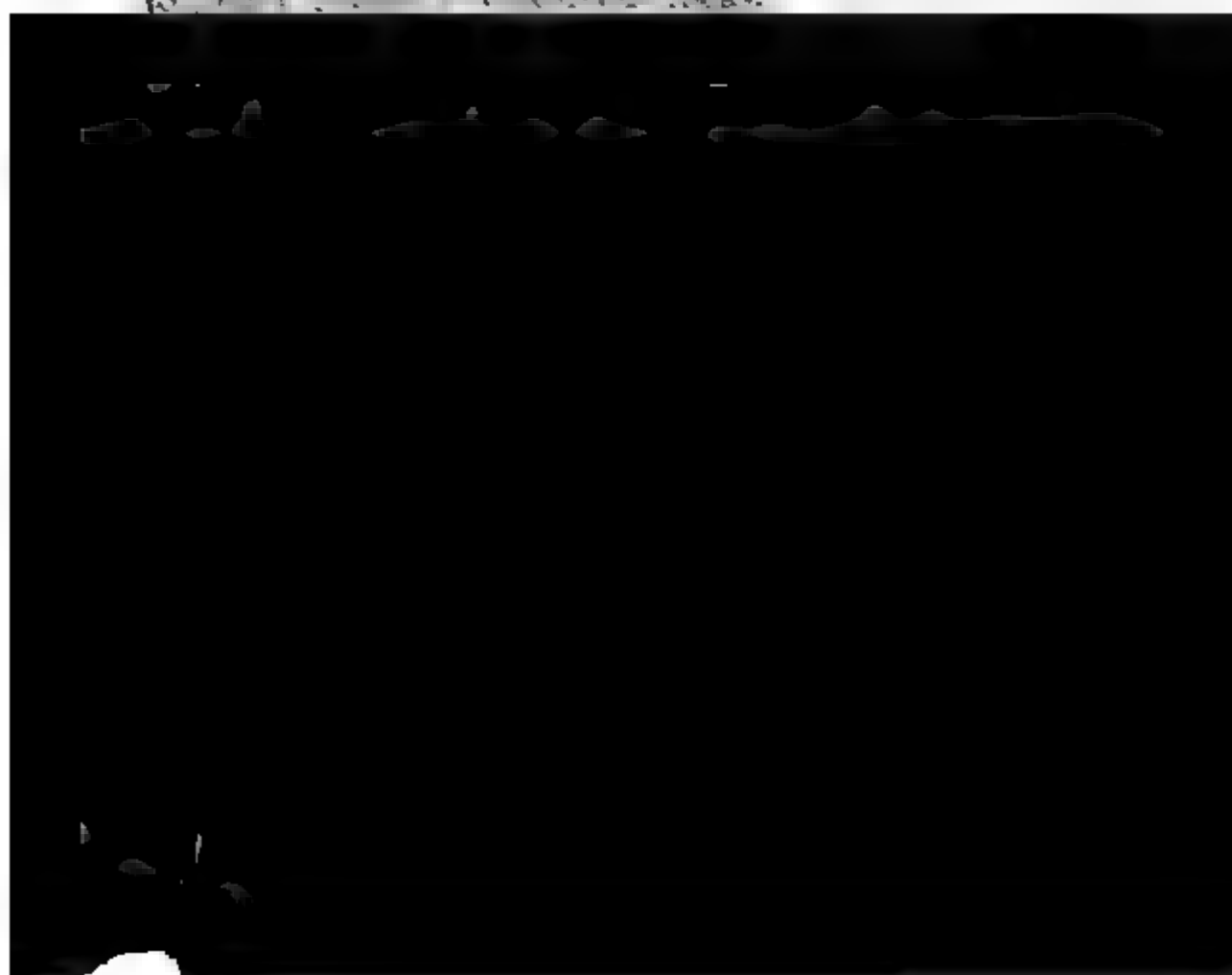
**S. A.** *Trichomanes-ramosum.* *Linn. Sp. Pl.* 1541. *Bolt. Fil.* 25. t. 2. f. 3.

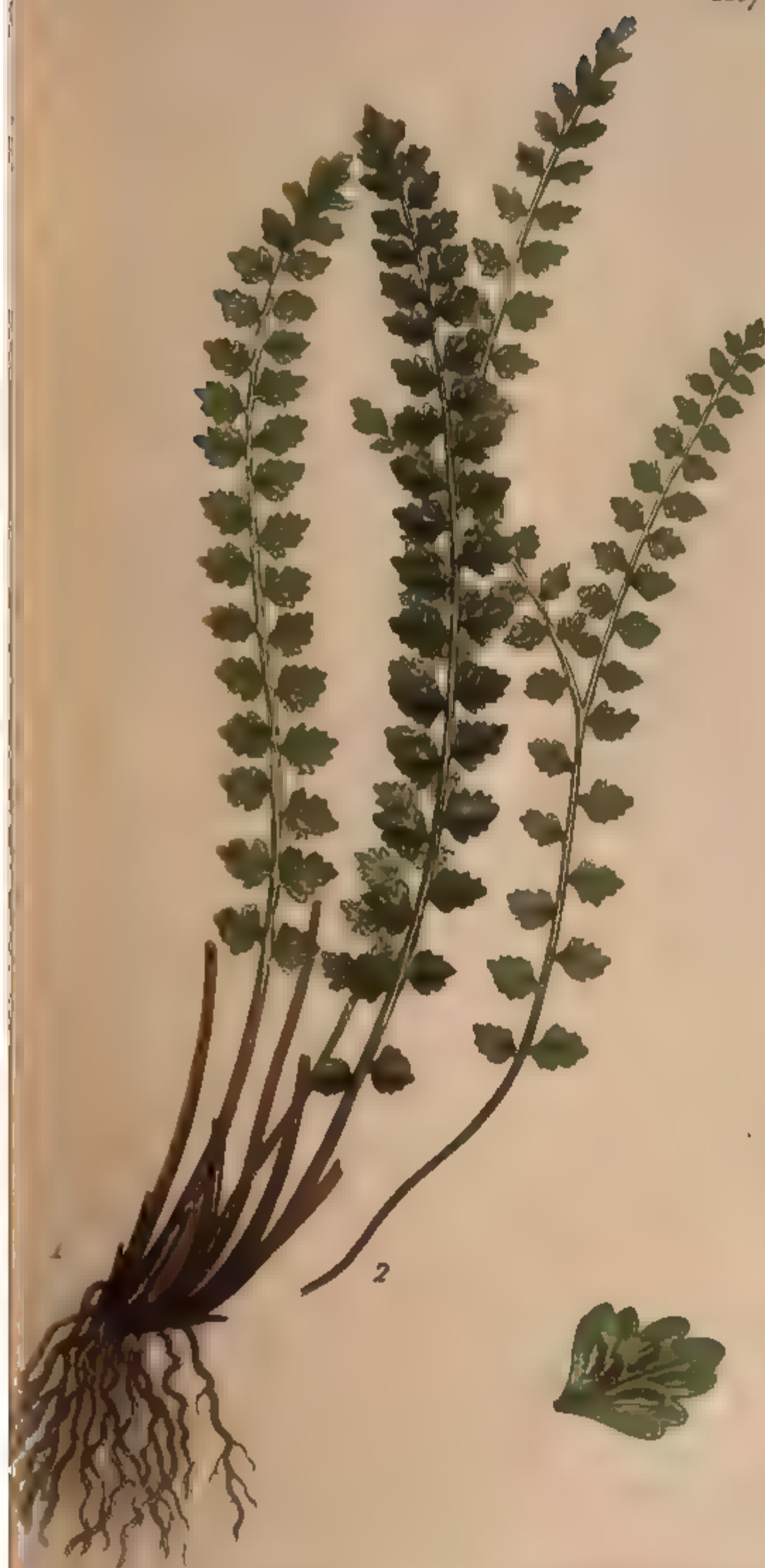
*Trichomanes ramosum.* *Bauh. Hist.* v. 3. 747. *Ruii Syn. ed.* 2. 46. *ed.* 3. 119.

*T. minus et tenerius.* *Moris. sect.* 14. t. 3. f. 11.

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**FOUND** on rocky mountains in Wales, Scotland, and the north of England. We have received wild specimens from Mr. Griffith and the Rev. T. Gisborne. It seems generally to grow on the north-facing rocks.





*Adiantum sp. (L.) Sw.*



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**ASPLENIUM marinum.**  
*Sea Spleenwort.*

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*CRYPTOGAMIA Filices.*

**GEN. CHAR.** *Fructif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

**SPEC. CHAR.** Frond pinnated. Leaflets ovate, oblique, serrated, obtuse; unequal and wedge-shaped at the base.

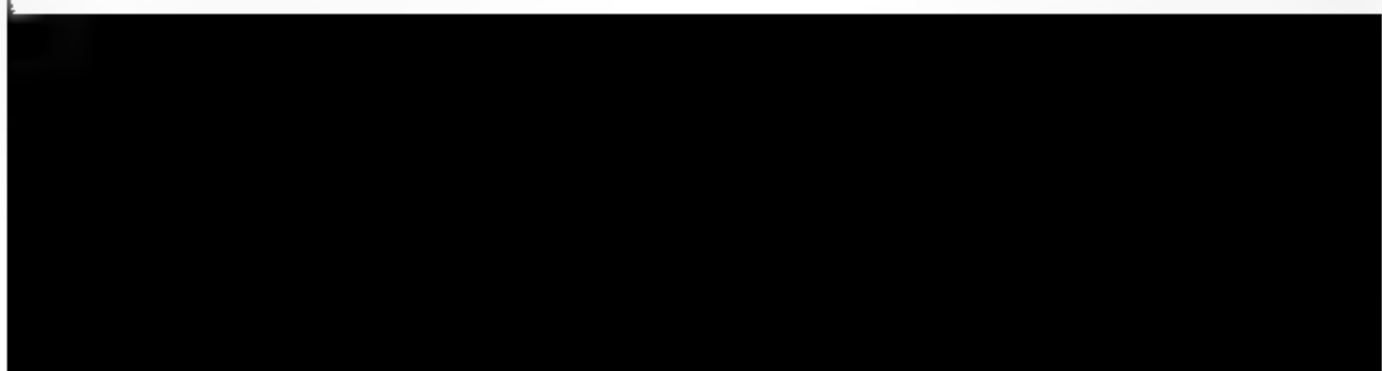
**SYN.** *Asplenium marinum.* *Linn. Sp. Pl.* 1540. *Huds. Fl. An.* 453. *With. Bot. Arr. v. 3.* 53. *Dischs. H. Sicc. fasc. 7.* 17. *Lightf. Scot.* 664. *Chamæfilix marina Anglica. Raii Syn.* 119.

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**GATHERED** by Mr. T. F. Forster, jun. on the rocks at Hastings, near the castle, where it was observed in the last century, as well as in some other parts of the south and west coast. Mr. Lightfoot found it in several places on the Scottish coast, and rightly refers to this plant Sibbald's wretched figures, *Scotia illustrata, tab. 3. f. 1, 2*, which have been taken for the *Adiantum trapeziforme* of Linnæus, an American fern, that has











ASPLENIUM septentrionale.

*Forked Spleenwort.*

CRYPTOGAMIA Filices.

GEN. CHAR. *Fruſtif.* in ſcattered lines. *Involucrum* originating laterally from a vein, and burſting inwardly.

SPEC. CHAR. Frond-wing three-cleft; ſegments alternate, linear, jagged at the points.

SYN. *Asplenium septentrionale.* *Hull.* 241.

*Acroſtichum septentrionale.* *Linn. Sp. Pl.* 1524.  
*Hudſ.* 450. *Wub.* 764. *Bolt. Fil.* 12. t. 8.  
*Dickſ. Dr. Pl.* 45.

*Filix ſaxatilis* Tragi. *Raii Syn.* 120.

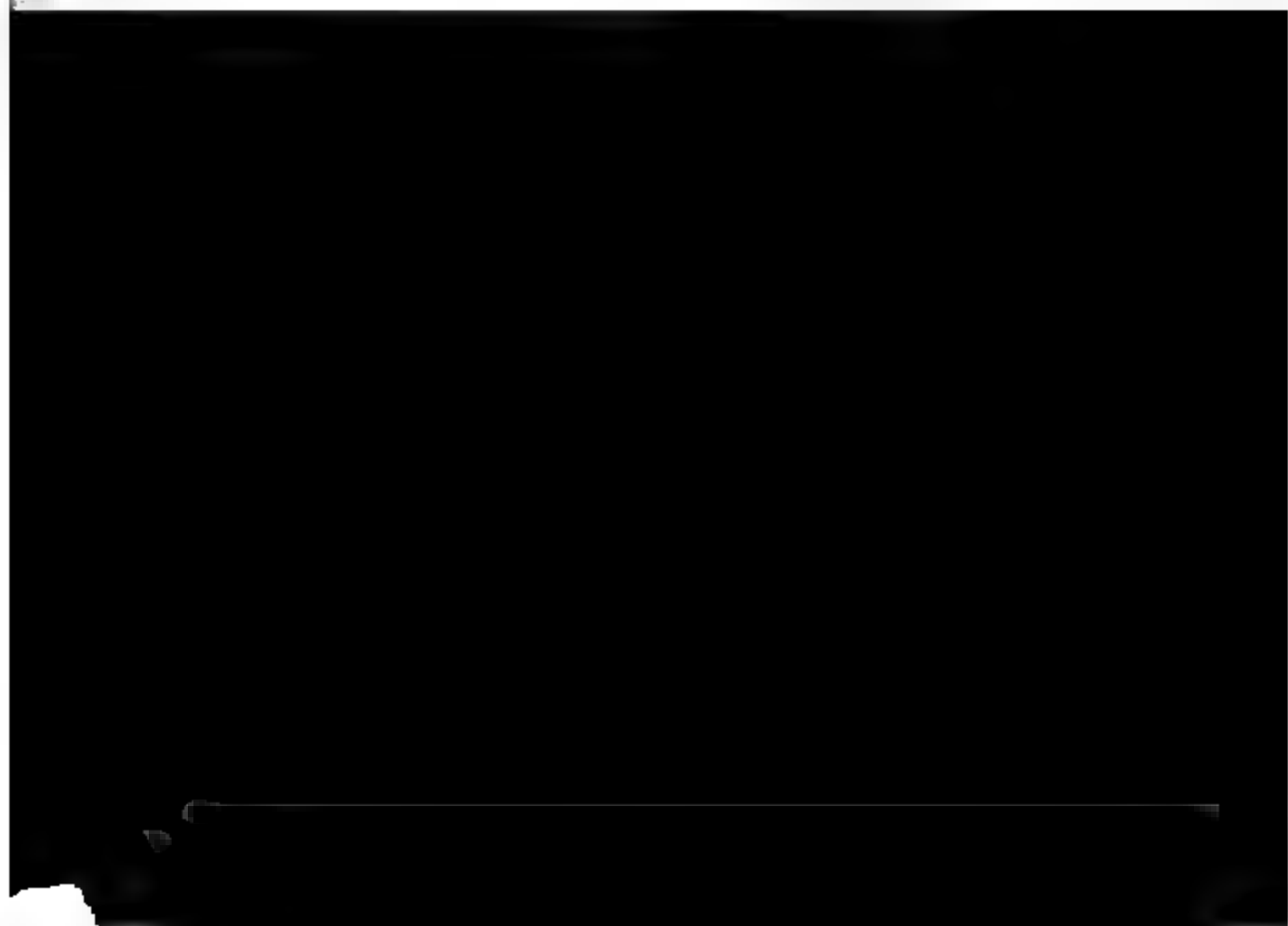
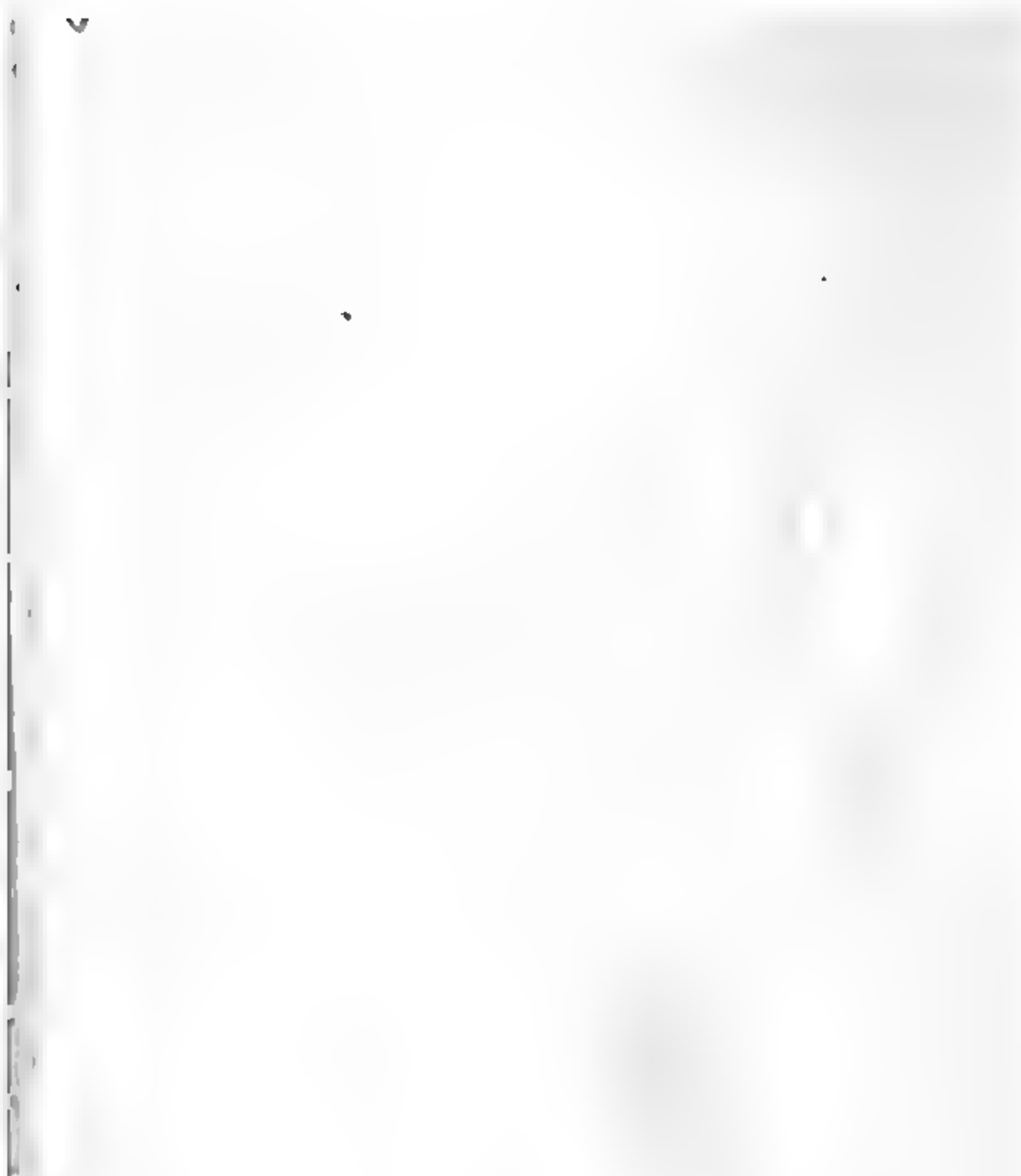
A NATIVE of clefts of rocks in ſome few mountainous parts of this iſland, as North Wales; Ingleborough, Yorkſhire, and above Ambleside, Weſtmoreland. At the Hermitage a mile ſouth of Edinburgh (a wild romantic ſpot), and upon Arthur's ſeat which overlooks that town, we have ſeen it in plenty, and it was obſerved there by Thomas Williſel in the days of Ray.

The roots are black, tufted and woody, throwing up innume-



1017







ASPLENIUM alternifolium.

*Alternate-leaved Spleenwort.*

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CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in scattered lines. . *Involucrum* originating laterally from a vein and bursting inwardly.

SPEC. CHAR. Frond pinnate; leaflets alternate, wedge-shaped, erect, jagged at the extremity.

SYN. Asplenium alternifolium. *Jacq. Misc.* v. 2. 51.

t. 5. f. 2. *Dicks. Tr. of Linn. Soc.* v. 2. 290.

*Sm. Fl. Brit.* 1130. *With.* 768. *Hull.* 241.

*A. germanicum.* *Weis. Gott.* 299. *Ehrh. Crypt.* 43.

*Scolopendrium alternifolium.* *Roth. Germ.* v. 3. 53.

*Adiantum novum germanicum, rutæ murariæ facie.* *Breyn. Cent.* 1. 97.

---

OUR good friend Mr. Dickson, whose discoveries have undoubtedly more copiously enriched the British Flora, than those of any other person since the days of Ray and Dillenius

2258









ASPLENIUM Ruta-muraria.

*White Maiden-hair or Wall-rue.*

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CRYPTOGAMIA Filices.

GEN. CHAR. *Fruſifications* in ſcattered lines. *Involucrum* originating laterally from a vein, and burſting inwardly (that is towards the nerve). *Smith Mem. of the Turin Acad. Vol. 5.*

SPEC. CHAR. Frond alternately twice compound; leaflets wedge-shaped notched.

SYN. *Asplenium Ruta-muraria. Linn. Sp. Pl. 1541. Hudſ. Fl. An. 453. Witb. Bot. Arr. V. 3. 53. Relb. Cant. 389.*

*Ruta muraria. Raii Syn. 122.*

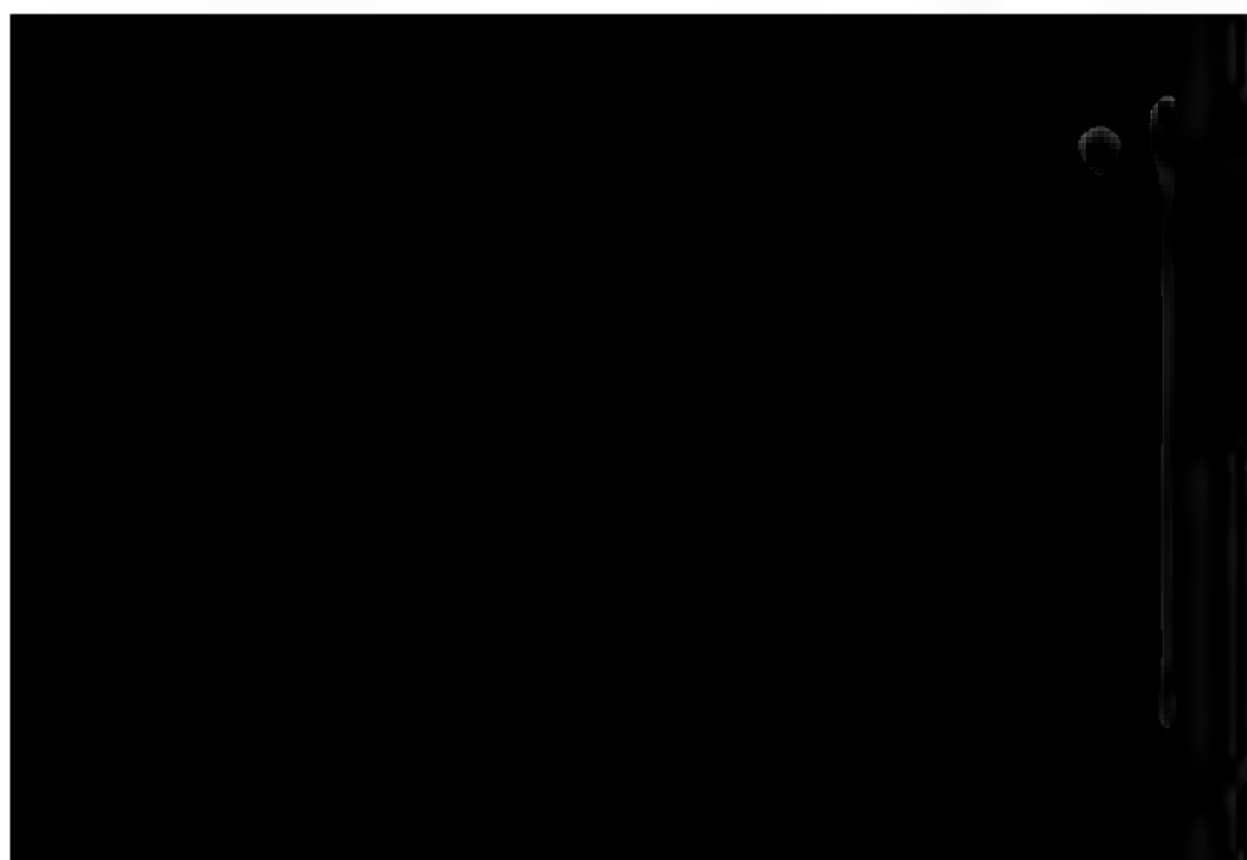
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OLD walls and ſhady rocks produce this little fern not unfrequently, varying much in ſize according to the degree of nourishment, or rather moiſture, that it meets with. The fruſifications may be found early in ſummer in the beſt ſtate for examination, when the membrane which covers each line is about to burſt. The genera of ferns can only be determined in that early ſtate, as many whole involucra are widely different



121







[ 1950 ]

ASPLENIUM *Adiantum-nigrum*.

*Black Maidenhair Spleenwort.*

---

CRYPTOGAMIA *Flicca*.

GEN. CHAR. *Fructif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

SPEC. CHAR. Frond somewhat deltoid, alternately thrice pinnated; leaflets lanceolate, sharpish, deeply serrated.

SYN. *Asplenium Adiantum-nigrum*. *Linn. Sp. Pl.* 1541. *Sm. Fl. Brit.* 1131. *Huds.* 454. *With.* 770. *Hull.* 242. *Relh.* 409. *Sibth.* 269. *Abbot.* 225. *Boit. Fil.* 30. t. 17.

*Adiantum nigrum officinarum*. *Raii Syn.* 126. n. 10. also 127. n. 12, 13.

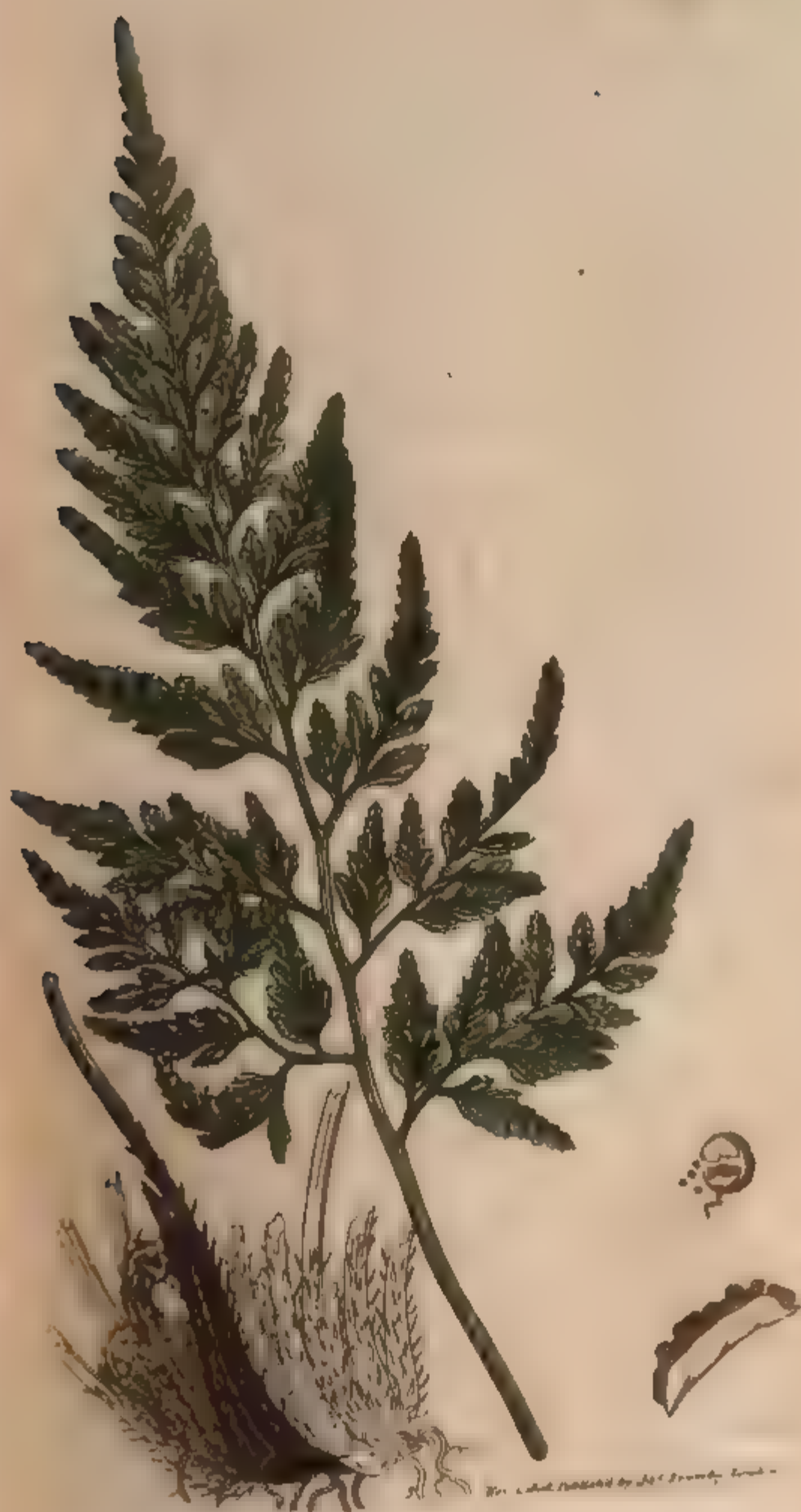
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FREQUENT in dry shady hedge bottoms, about the roots of old trees, on ruined buildings and among rocks, bearing seed in the summer and autumn.

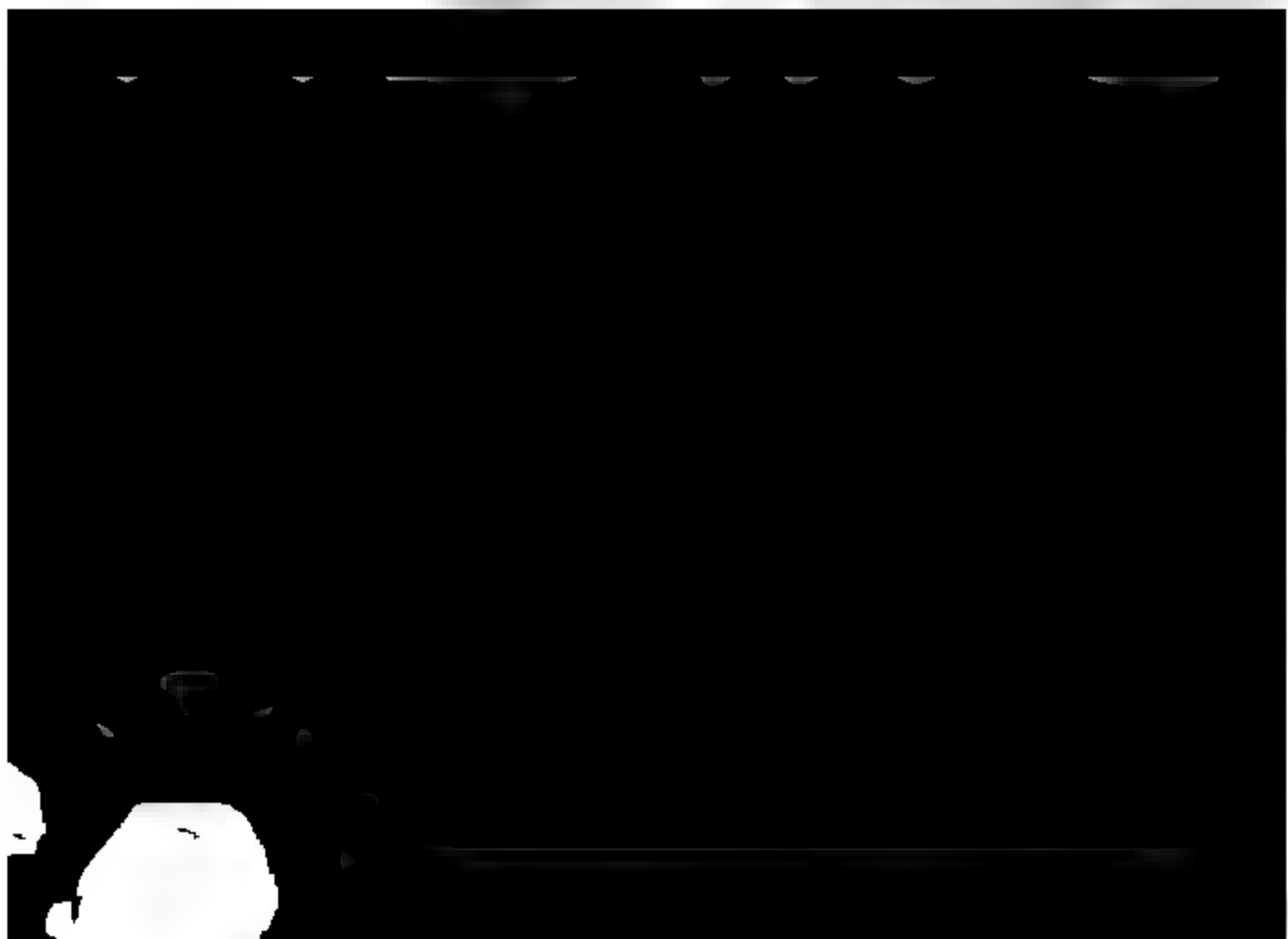
Root perennial, black and tufted. Fronds numerous, upright, a foot or thereabouts in height, firm, oblong, but assuming a deltoid or triangular figure from the elongation of their first pair of ramifications. They are throughout alternately tripinnate; the leaflets rather acutely and deeply serrated or cut, except at their base, which is entire and wedge-shaped. The colour of the frond is a darkish shining green; that of the stalk deep purple, and polished. The covers of the fructification are very conspicuous for their whiteness and abundance. Capsules red-brown.

The variety *δ* of *Fl. Brit.* which is No. 13 of Ray's *Synopsis*, was found by Sherard in a dark cave on the mountains of Mourne, Ireland, and is preserved in his herbarium at Oxford, where, by the kind permission of Professor Williams, we have examined it. Nothing can be more delicate and elegant than the specimen. We think with Dillenius it most probably belongs to the variety of *Psidium*, and it seems analogous to the variety of *Psidium*, called the *cambricum*, being like that fine variety of fructification.

3050



Her. Acad. Bot. Hort. Berol. 1840. 1841. 1842. 1843. 1844. 1845. 1846. 1847. 1848. 1849. 1850.







ASPLENIUM lanceolatum.  
*Lanceolate Spleenwort.*

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in scattered lines. *Involucrum* originating laterally from a vein, and bursting inwardly.

SPEC. CHAR. Frond lanceolate, alternately doubly pinnated; leaflets obovate, deeply and sharply crenated.

SYN. Asplenium lanceolatum. *Hudf. Fl. An.* 454  
*Willd. Bot. Arr.* v. 3. 54

THIS fern, which seems to have been hitherto but very little known, was discovered by Mr. T. F. Forster jun. on the Great Rocks at Tunbridge Wells. Specimens of it gathered by the celebrated circumnavigators of the same name in the Island of Fayal, one of the Azores, are preserved in Sir J. Banks's herbarium. There appears to be no doubt of its being Mr. Hudson's *A. lanceolatum*, but we dare not adopt his uncertain synonym of Ray; for it does not seem probable that the botanists of that day, inattentive to the fructification of ferns, would have judged the plant before us to be by any means allied to *A. Adiantum-nigrum*. Neither can we assent to its being *A. Trichomanes-ramosum* of LINNÆUS. For although no









[ 1150 ]

## SCOLOPENDRIUM vulgare.

*Common Hart's-tongue.*

---

*CRYPTOGAMIA Filices, annulata.*

**GEN. CHAR.** *Fruſtif.* in scattered double lines, between veins. *Invol.* superficial, folding lengthwise over one another, separating by a longitudinal suture.

**SPEC. CHAR.** Frond undivided, tongue-shaped; cordate at the base; smooth beneath.

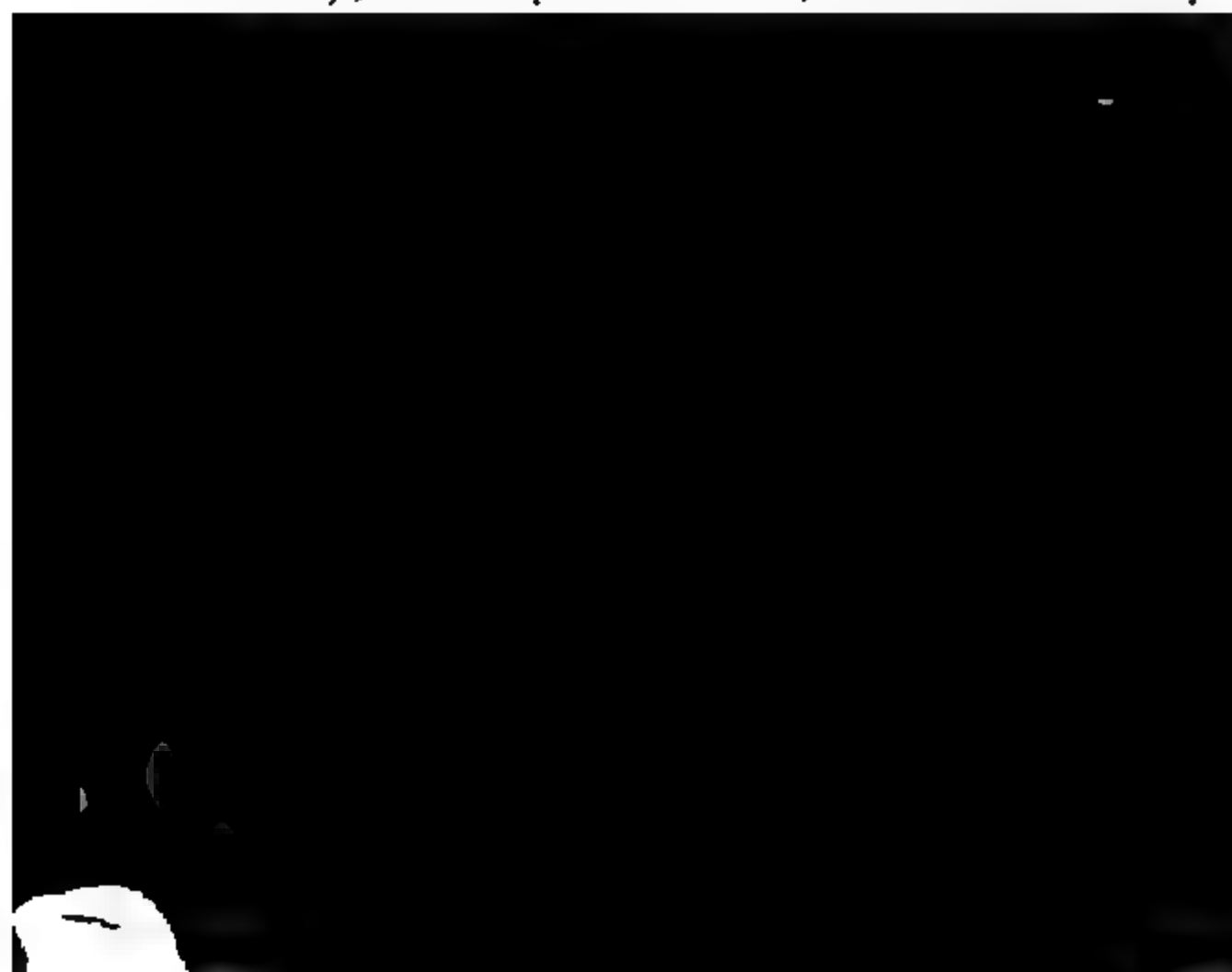
**SYN.** *Scolopendrium vulgare.* *Sym. Syn.* 193.

*Asplenium Scolopendrium.* *Linn. Sp. Pl.* 1537.  
*Huds.* 452. *Witb.* 766. *Hull.* 241. *Relb.* 408.  
*Sibth.* 268. *Abbot.* 225. *Bolt. Fil.* 18. t. 11.  
*Curt. Lond. fasc.* 1. t. 67. *Woodv. Suppl.* t. 272.  
*Phyllitis.* *Raii Syn.* 116.

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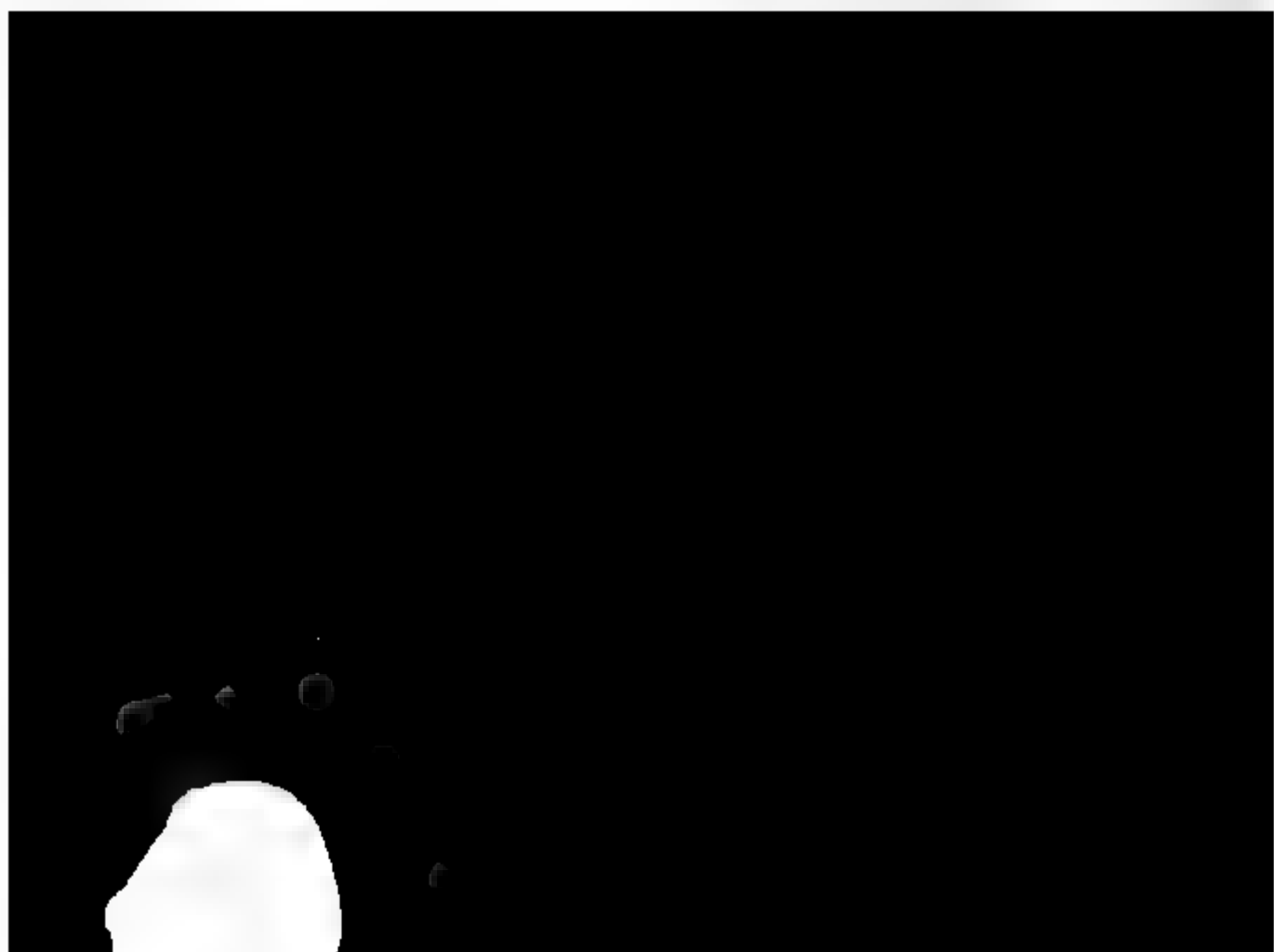
**COMMON** about moist shady rocks, deserted mines, the insides of wells, and other damp hollow places. The fructification is most perfect for examination about July.

Root perennial, tufted. Fronds many, a foot or 18 inches high, erect, of a full grass green, stalked, lanceolate, acute, entire, waved, smooth except the stalk and back rib, which are scaly; heart-shaped at the base; sometimes accidentally





49 1891 Published by the University of Chicago







SCOLOPENDRIUM Ceterach.

*Common Scaly Spleenwort.*

---

CRYPTOGAMIA Filices, annulatæ.

GEN. CHAR. *Fructif.* in scattered double lines, between veins. *Invol.* superficial, folding lengthwise over one another, separating by a longitudinal suture.

SPEC. CHAR. Frond pinnatifid, lanceolate, scaly beneath.

SYN. Scolopendrium Ceterach. *Sm. Fl. Brit.* 1134. *Sym.* 193. *Roth. Germ. v. 3.* 48.

*Asplenium Ceterach.* *Linn. Sp. Pl.* 1538. *Huds.* 452. *With.* 767. *Hull.* 241. *Bolt. Fil.* 20. *t.* 12.

*A. sive Ceterach.* *Raii Syn.* 118.

---

LESS frequent than the other British *Scolopendrium* represented in our *t.* 1150, but still far from uncommon on calcareous rocks and walls in the west and north of England. About Bristol it has been constantly observed since the days of Ray. In Oxfordshire and even in Norfolk, it is sometimes seen on old churches or castles. It is found in fructification at all seasons, when situated in shady or moist places. We have preserved it for several years in a garden.

The root is perennial, furnished with many very black fibres. Fronds numerous, from 4 to 8 inches high, spreading, lanceolate, deeply cut into numerous alternate, entire, blunt, regular lobes; smooth and dark green above, not shining; densely covered beneath with membranous, lanceolate, reticulated, serrated, shining, rusty-coloured scales, which give this fern a very peculiar and striking appearance. The lines of capsules are numerous, bordered on each side by an entire involucre, which however is so much concealed by the scales, as not to be discoverable without great care. The stalk of the frond is black and shining, more or less scaly.







**BLECHNUM boreale.***Northern Blechnum.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Fruſtif.* in longitudinal continued lines, near the rib. *Involucrum* superficial, continued, opening towards the rib.

**SPEC. CHAR.** Frond pinnated, smooth; its lobes linear, bluntish, entire, scarcely dilated at the base.

**SYN.** *Blechnum boreale.* Swartz. in Schrad. Journ. ann. 1800, v. 2. 75.

B. Spicant. With. 765. Hull. 242. Sym. 193. Relb. 407.

*Osmunda borealis.* Salisb. Prod. 402.

O. Spicant. Linn. Sp. Pl. 1522. Hudf. 450. Abbot. 224. Bolt. Fil. 8. t. 6. Curt. Lond. fasc. 2. t. 67.

*Acrostichum Spicant.* Sibth. 267.

*Lonchitis aspera.* Raii Syn. 118.

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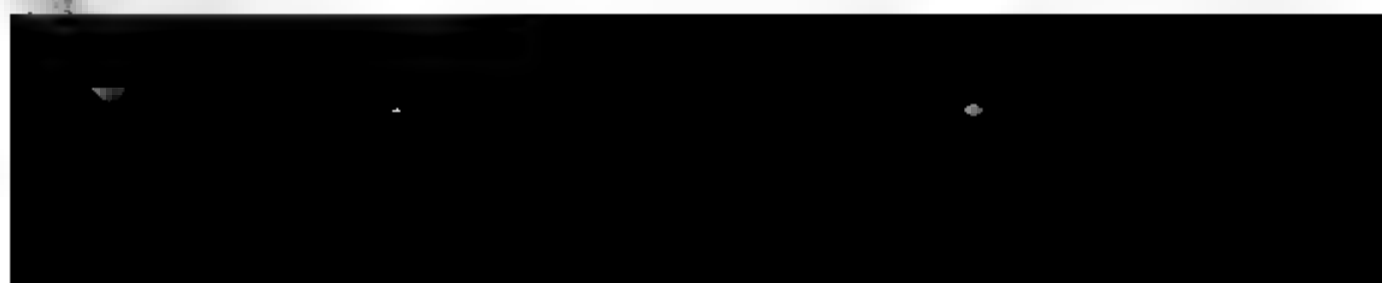
**A** NATIVE of moist shady places, as well as of open barren and stony heaths, where its seeds are perfected in July and August.

Root perennial, black and scaly. Fronds several, a foot





No. 1 1885 Published by the University of California







P T E R I S aquilina.  
Common Brakes.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in a marginal continued line.  
*Invol.* formed of the reflexed margin of the leaf  
itself, uninterrupted and bursting inwards.

SPEC. CHAR. Frond thrice pinnate; its segments lanceolate, bluntish; the lowermost pinnatifid; the uppermost smallest.

SYN. *Pteris aquilina.* Linn. *Sp. Pl.* 1533. Sm. *Fl. Brit.* 1136. Huds. 451. With. 765. Hull. 242. Relh. 407. Sibth. 267. Abbot. 224. Bolt. *Fil.* 16. t. 10.

*Filix foemina.* Raii *Syn.* 124.

β. *F. saxatilis ramosa maritima nostras.* Raii *Syn.* 125. Pluk. *Phyt.* t. 182. f. 1.

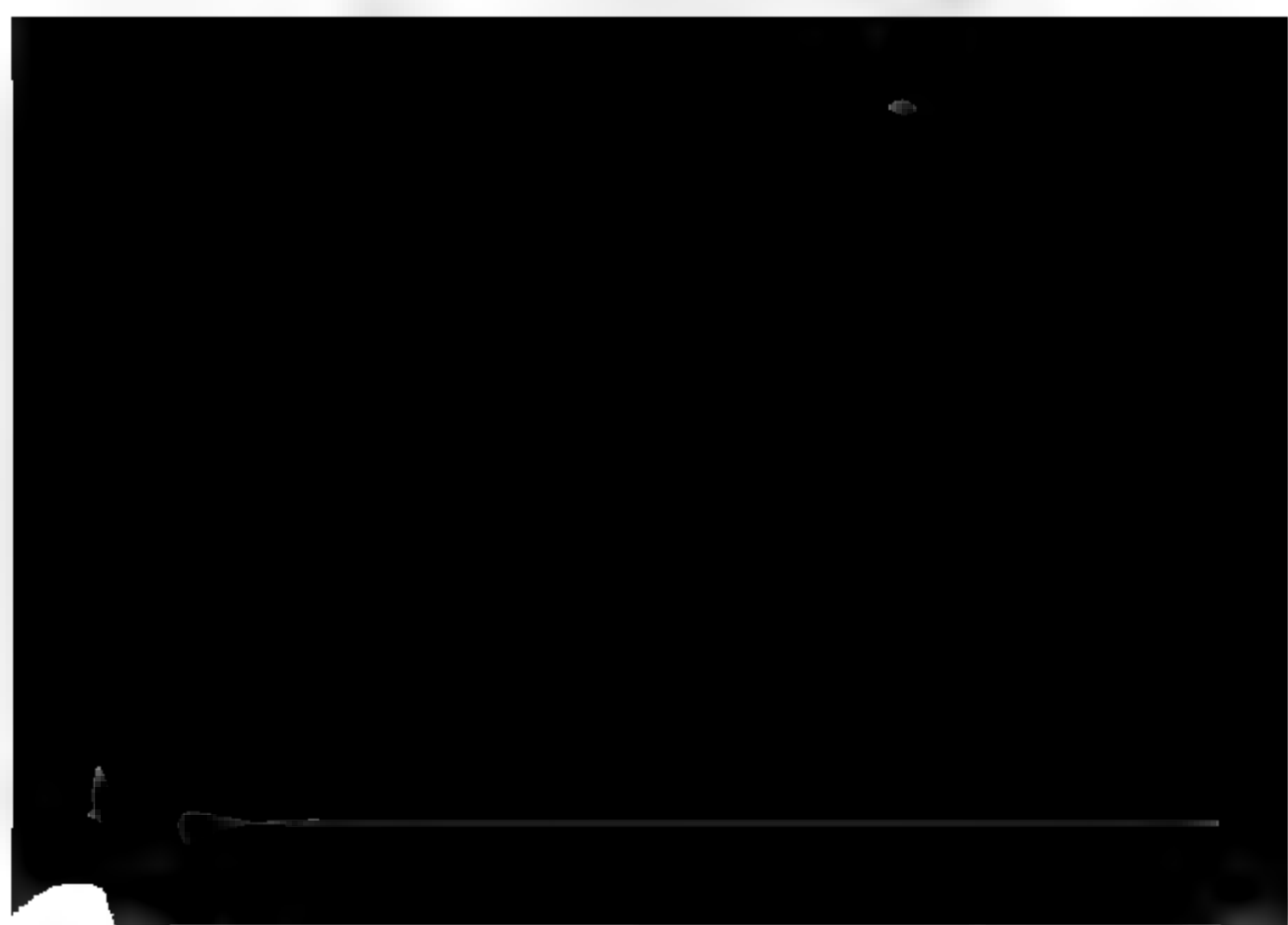
THE most common of European ferns, growing copiously on heaths and open hilly places, as well as in thickets and woods, in all parts of our island. The root is perennial, the herb annual, springing up about April, when its unrolling scaly shoots are remarkable. It is sometimes killed down to the root by frosts in the spring, as happened all over Thetford heath this year, 1806.

The frond is erect, from 1 to 6 feet high, elegantly spreading, repeatedly compound, pinnate, its greater subdivisions more opposite than the smaller; the ultimate ones alternate, sessile, close, lanceolate, entire, rather blunt; smooth and striated above; broad at the base; their margin inflexed, jagged, hairy, covering the fructification. The barren leaflets are pale and hairy beneath. Capsules pale brown, each bound with a ring, and supported by a taper stalk. The main stem is angular and sharp-edged, cutting the hands of those who gather it unwarily. A transverse section shows the pith of a branched figure, compared by some to a spread-eagle, by others to King Charles in the oak; but rustic lovers fancy they here see the initials of their future spouse, of which there is no doubt, for the figures in question express any thing at the pleasure of the imagination. The principal use of this plant besides is for firing;

“*Neglectis urenda filix innascitur agris.*” Hor. Sat.

The delicate variety β grows on damp walls or rocks near the sea, and has rounder more distant leaflets. By culture it assumes the proper appearance of the species.







11

12

13

14

[ 1160 ]

**PTERIS** *crispa.*

*Curled or Rock Brakes.*

**CRYPTOGAMIA** *Filices.*

**GEN. CHAR.** *Fruktif.* in a marginal continued line.  
*Invol.* formed of the reflexed margin of the leaf  
itself, uninterrupted and bursting inwards.

**SPEC. CHAR.** Frond thrice pinnate; the barren leaflets wedge-shaped, cut; the fertile elliptical, obtuse, convex.

SYN. *Pteris crispa*. Linn. *Ms. in Sp. Pl.* 1522.  
*Witb.* 764. *Hull.* 243.

*Osmunda crispa.* Linn. Sp. Pl. 1522. Hudf. 450.  
Lightf. 655. Bolt. Fil. 10. t. 7.

**Adiantum album crispum alpinum. *Raii Syn.* 126.**

**T**HE dry barren sides of mountains in Westmoreland, Wales and Scotland derive no inconsiderable degree of beauty from the pea-green feathery tufts of this elegant fern, which spring out of their stony crevices, sometimes in great abundance, and are strikingly different in appearance from every other British plant of the same family, looking, when young, more like the leaves of the umbelliferous tribe. The fructi-



Van 3 180. *Strophium l. l.* 1. l. l. l.







ADIANTUM Capillus Veneris.

*True Maidenhair.*

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* in roundish, marginal, distinct dots. *Involucra* like scales, from the margin of the frond turned in, distinct, opening inwards.

SPEC. CHAR. Frond doubly compound; leaflets alternate, stalked, wedge-shaped, lobed.

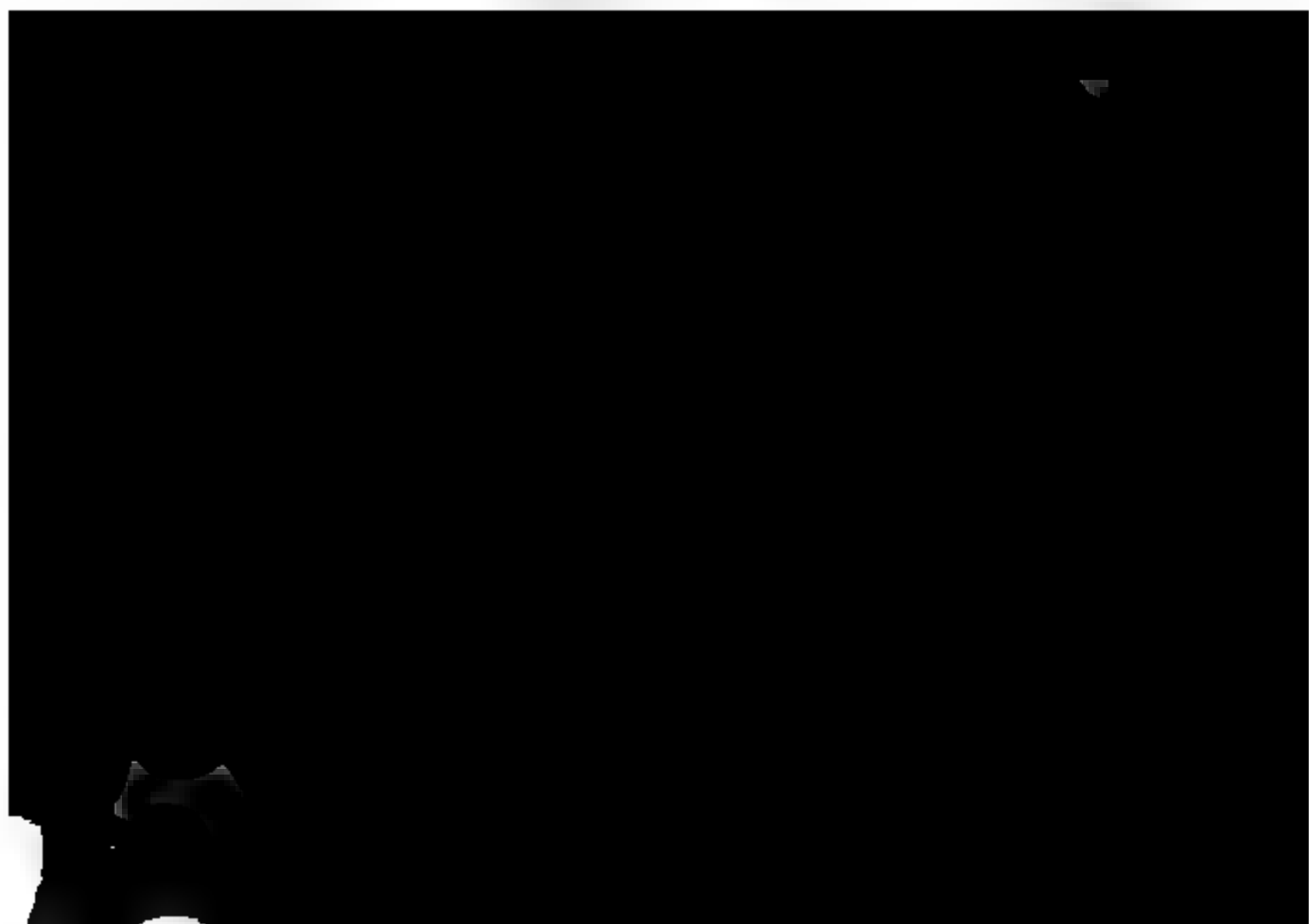
SYN. *Adiantum Capillus Veneris.* Linn. *Sp. Pl.* 1558.  
*Sm. Fl. Brit.* 1138. *Huds.* 460. *With.* 781.  
*Hull.* 243. *Lightf.* 679. *Bolt. Fil.* 24. t. 29.  
*Dicks. H. Sicc. fasc.* 6. 16.  
*Capillus Veneris verus.* Dill. in *Raii Syn.* 123.

---

THIS rare and most elegant fern was gathered in the south islands of Arran near Galloway last October by Mr. J. T. Mackay. We are indebted to that gentleman, and to Dr. Scott of Dublin, for fine wild specimens.

Nothing can be more beautiful than this *Adiantum* when growing among trickling rills in the crevices of shady rocks, which it overhangs in the most graceful manner. The roots are perennial, fibrous, tufted and shaggy. Stalks from 6 to 12 or 15 inches high, slender, smooth, of a purplish shining black. Branches alternate, capillary, of the same colour. Leaflets alternate, wedge- or fan-shaped, smooth, thin, veiny, dilated upwards and unequally lobed, their summits turned back, as it were, in the form of brown scales, each of which covers a small congeries of capsules.







## CYATHEA fragilis.

*Brittle Cup-fern.*

## CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, roundish, growing out of an hemispherical calyx, which bursts at the top without a cover.

SPEC. CHAR. Frond bipinnate: its leaflets pinnatifid, sharply and deeply serrated. *Fructifications* a little distant. Calyx torn. Common stalks winged.

SYN. *Cyathea fragilis*. Sm. *Fl. Brit.* 1139. *Sym.* 194. *Roth. Fl. Germ. v. 3.* 94.

*Polypodium fragile*. Linn. *Sp. Pl.* 1553. *Huds.* 459. *With.* 779. *Hull.* 240. *Lightf.* 677. *Dicks. Dr. Pl.* 15. *Bolt. Fil.* 50. t. 27, & 46.

*Filix saxatilis, caule tenui fragili.* *Raii Syn.* 125.

ABUNDANT in the mountainous parts of Britain, growing on moist shady rocks, or old buildings, to which it is a great ornament in the summer months.

Root perennial, tufted, crowned with brown scales. Fronds from 4 inches to a foot high, delicate and tender, each with a smooth juicy brittle blackish stalk. The frond itself is lanceolate, acute, smooth, bright green, doubly pinnate. Leaflets alternate, cut, most frequently pinnatifid, sometimes obovate, more generally lanceolate, sharply and deeply serrated, pointed, their nerves more or less wavy. General and partial stalk bordered with a narrow wing. Dots of fructification numerous, alternate, round, brown or black, not confluent except when old. Involucrum or calyx cup-shaped, embracing the capsules underneath, bursting laterally, jagged, at length reflexed and obliterated.

No fern varies more in the number, form and breadth of its subdivisions. When large, most compound, and finely cut, it is the *Polypodium rheticum* of British writers. When smaller and less compound, it is, according to the Rev. H. Davies, the *P. ilrense* of Ray's *Synopsis* 117.



*Adiantum species, published by the Toronto Botanical Society*







## CYATHEA incisa.

*Lacinated Cup-fern.*

---

CRYPTOGAMIA Filices.

**GEN. CHAR.** *Fructifications* scattered, roundish, growing out of an hemispherical calyx, which bursts at the top without an operculum. *Smith Mem. of the Turin Acad. vol. 5.*

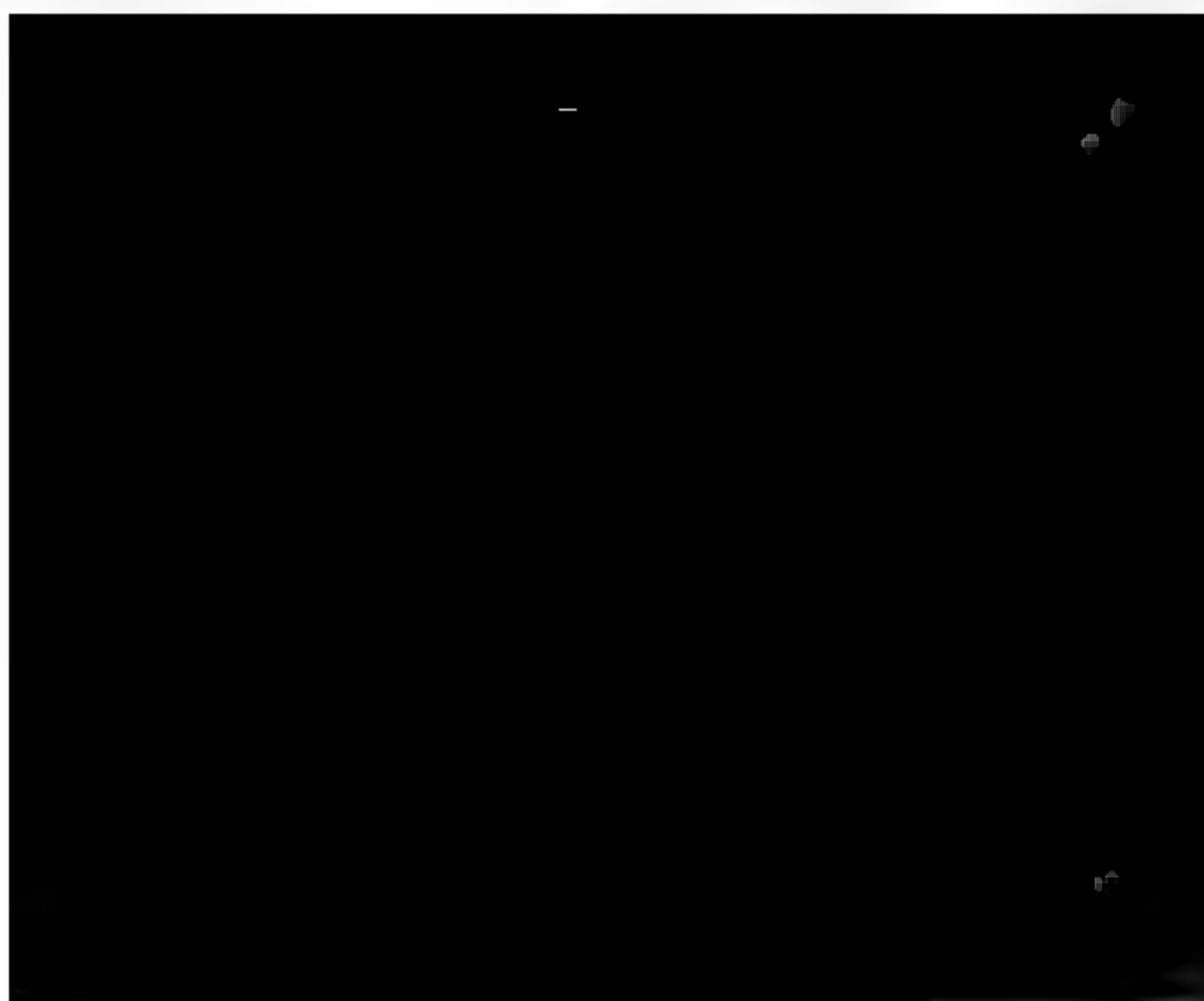
**SPEC. CHAR.** Frond lanceolate, bipinnate, pinnatifid; its segments lobed, obtuse, and beardless. Stalk slightly winged. Calyx lacerated, and turned to one side.

**W**E received this fern from a wall near Walthamstow, where it was found by Mr. T. F. Forster jun. who thinks it distinct from *Cyathea fragilis* (*Polypodium fragile* of Linnæus). We dare not positively assert it to be so, but rather offer it for the consideration of botanists conversant with this intricate tribe. The chief difference consists in the divisions of the leaves of our fern being obtuse, and perfectly destitute of the bristly point observable in the other. There is also some difference in their habit and appearance, and the fructification of the *fragilis* is blacker. We have been inclined to believe ours the *P. regium* of Linnæus; but the original specimen of that in the Clifortian herbarium has a triangular, not lanceolate, frond. Neither is ours *P. alpinum* of Jacquin, the divisions of which are linear, or nearly so.

With respect to the generic character, we hope to give a more clear idea of it in figuring *C. fragilis*, as in this the parts are too minute, and the structure too obscure; but it is essential to the genus that the young capsules are enveloped in a globular membrane, which goes underneath them, and bursts either at the top, in an even or lacerated manner, or at the side (fig. 1.) as in this species and some others.

In some specimens the fronds are broader and more dilated than those we have drawn.







[ 1588 ]

CYATHEA dentata.  
Toothed Cup-fern.

---

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, roundish, growing out of an hemispherical calyx, which bursts at the top without a cover.

SPEC. CHAR. Frond bipinnate: its leaflets ovate, obtuse, deeply and bluntly toothed, pointless.

SYN. *Cyathea dentata*. Sm. *Fl. Brit.* 1141.

*Polypodium dentatum*. Dick. *Crypt. fasc.* 3. 1. t. 7.

f. 1. *H. Sicc. fasc.* 5. 16. *Wilh.* 776. *Hull.* 238.

---

**FOUND** only in the clefts of alpine rocks on the highest mountains of Scotland and Wales. Our specimen was communicated by the Rev. H. Davies from the last mentioned country. It grows at the foot of the walls of Castle Dinas Brwn, Flintshire. Mr. Griffith has sent us fine specimens from Snowdon. In July it is in perfection.

This is generally smaller than the *C. fragilis*, and the frond less compound, being sometimes scarcely bipinnate. The specimen in our plate exhibits its most perfect form, which is bipinnate: the leaflets ovate, obtuse, very deeply but bluntly toothed, the teeth and terminations quite destitute of any point or bristle. The main nerve of each leaflet is zigzag. The common stalk is winged towards the top only. Its base is mostly smooth, sometimes shaggy. Dots of fructification large, and soon becoming entirely confluent.

Some differences of opinion have arisen among botanists on the continent concerning my genus of *Cyathes*. for want, as I apprehend, of their being acquainted with all the species, in their different states, which form a chain from *C. enlosa* to these small ones. The character consists in the calyx or involucre, whether of 1 piece or of many, going entirely under the globular receptacle to which the capsules are fixed.



Adiantum sp.







**HYMENOPHYLLUM Tunbridgense.**  
*Tunbridge Filmy-leaf.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Fructifications* inserted into the margin of the frond, distinct. *Involucrum* two-valved, flat-tish, straight, opening outwards, longer than the *Colum.* *Smith Mem. of the Turin Acad.* vol. 5.

**SPEC. CHAR.** Fronds alternately bipinnate, decurrent, sharply serrated as well as the involucrum. Fructifications solitary at the upper edge of the base of each general division of the frond.

**SYN.** *Trichomanes Tunbridgense.* *Lin. Sp. Pl.* 1561.  
*Hedl. F. An.* 461. *Wilt. Bot. Arr.* vol. 3. 65.  
*Adiantum petraeum perpetuum Anglicum, foliis*  
*bifidis vel trifidis.* *Rea Syn.* 183.

---

**GATHERED** near Tunbridge by Mr. T. F. Forster jun. It grows also in Wales, Westmoreland, and the north parts of Yorkshire, on horizontal moist rocks, which it clothes in large tufts. Mr. Lightfoot mentions this species as common in Scotland. The slender wiry roots spread very far, throwing out fibres here and there, and producing numerous upright leaves or fronds, which when sometimes dried up in summer curl backwards. Their substance is extremely membranous and pellucid, appearing thin and transparent under a microscope,









[ 1417 ]

**HYMENOPHYLLUM alatum.***Wing-stalked Filmy-leaf.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** *Fructifications* inserted into the margin of the frond, distinct. *Involucrum* 2-valved, flattish, straight, opening outwards, longer than the *column*.

**SPEC. CHAR.** Fronds tripinnate, lobed, decurrent; segments linear, bluntish, entire. Main stalk and branches winged. Fructifications oblong, crenate, solitary at the upper edge of the base of each subdivision of the frond.

**SYN.** *Hymenophyllum Tunbrigense* β. *Sm. Fl. Brit.* 1142.

*Trichomanes pyxidiferum.* *Huds.* 461. *Bolt. Fil.* 56. *t.* 30. *With.* 781. *Hull.* 243.

**T.** *Tunbridgense* var. 3. *With.* 782. *Hull.* 244.

*Filix humilis repens, foliis pellucidis et splendentibus, caule alato.* *Dill. in Raii Syn.* 127. *t.* 3. *f.* 3, 4.

---

Fig. 7



*Adiantum acrostichum* L.







PILULARIA globulifera.

*Pill-wort, or Pepper-grass.*

CRYPTOGAMIA *Miscellanea.*

GEN. CHAR. *Common Receptacle* globose, with four cells and four valves, lined with numerous *antheræ*, and many globose *germens* beneath them.

SPEC. CHAR. - - - -

SYN. *Pilularia globulifera.* Linn. *Sp. Pl.* 1563. *Huds.* 462. *Willd.* 760.

*Graminifolia palustris repens, vasculis granorum piperis æmulis.* *Raii Syn.* 136.

SENT from near Yarmouth by Mr. D. Turner. It grows in watery places on gravelly or sandy heaths, as at St. Faith's Newton near Norwich, as also on Hillingdon common and Hounslow heath, though by no means a general plant, for it is not mentioned in the Cambridge or Oxford Floras.

The stem is perfectly prostrate and trailing, throwing out numerous roots (supposed to be perennial) by which it creeps to a considerable extent. Leaves simple, upright, awl-shaped, narrow and smooth. Fructification resembling pepper-corns, but downy, sessile, solitary, axillary, produced from May to the end of Autumn. What at first sight seems a capsule, is, in fact, a hollow receptacle, as in the fig, which separates into four valves, and is internally divided into as many cells. The valves are lined with organs of fructification, several sessile club-shaped *antheræ* being in the upper part, and about as many oblong *germens* occupying the lower. Jussieu says the *antheræ* are most numerous. He also remarks that the seeds are coated. Mr. Sowerby found the *germens* shaped like an acorn reversed, and terminating in a small acute style.

From the above description it appears that the *Pilularia* has almost as good a right to a place among the perfect flowers as the fig, and might perhaps be ranged in the *Monœcia Polyandria*. In habit and sensible qualities it has most affinity with the *Equisetum*, *Lycopodium*, and other plants of obscure fructification, which are akin to the proper Ferns.



*Handwritten text, likely a species name or description, written vertically.*





1.  
10 2

[ 1084 ]  
**ISOETES lacustris.**  
*Quillwort.*

---

**CRYPTOGAMIA Filices.**

**GEN. CHAR.** Male within the base of the inner leaves. *Anthera* solitary, standing on a heart-shaped receptacle.

Female within the base of the outer leaves. *Germen* standing on a heart-shaped receptacle. *Capsule* membranous. *Seeds* many, angular, rough.

**SPEC. CHAR.** Fronds awl-shaped semicylindrical. Capsules roundish, of two cells. Seeds granulated all over.

**SYN.** *Isoetes lacustris.* *Linn. Sp. Pl.* 1563. *Huds.* 462. *Witb.* 760. *Hull.* 245. *Lightf.* 683. *Bolt. Fil.* 74. t. 41.

*Calamaria folio brevior et crassior.* *Dill. Musc.* 540. t. 80. f. 1.

*Subularia vulgaris erecta, folio rigidissimo.* *Raii Syn.* 306.

---

**QUILLWORT** is only found under water about the margins of the most alpine British lakes, where it bears its fructification early in summer. We have received it from Mr. G. Donn, and from our late much esteemed friend Mr. J. Mackay. The root is perennial, tuberous, throwing out many









## SPHAGNUM latifolium.

*Broad-leaved Bog-moss.*

---

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Veil* cut round, its base remaining on the base of the capsule. *Antheræ* surrounded with a ring.

SPEC. CHAR. Branches bent downwards, swelling. Leaves ovate, obtuse, concave.

SYN. *Sphagnum latifolium*. *Hedw. Sp. Musc.* 27. *Sm. Fl. Brit.* 1145. *Turn. Musc. Hibern.* 5.

*S. palustre* α. *Linn. Sp. Pl.* 1569. *Huds.* 465. *With.* 783. *Hull.* 245. *Retz.* 412. *Sibth.* 273. *Abbot.* 228.

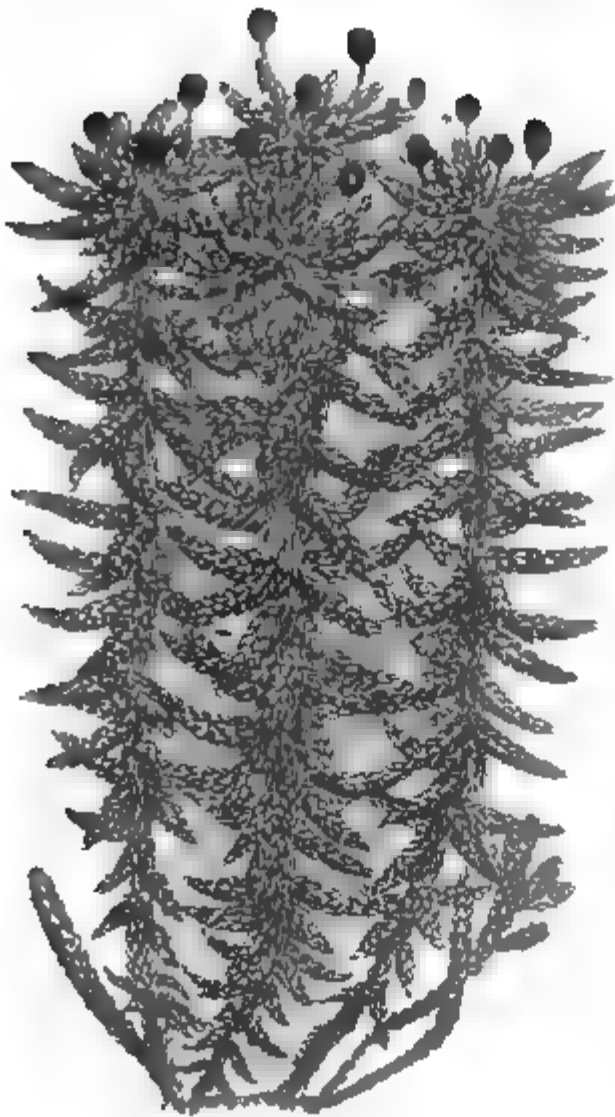
*S. palustre molle deflexum*, squamis cymbiformibus. *Dill. Musc.* 240. t. 32. f. 1.

*S. cauliferum et ramosum palustre molle candicans*, reflexis ramulis, foliis latioribus. *Dill. in Raii Syn.* 104.

---

THIS moss, in large soft elastic spongy tufts, covers the surface of watery turfy bogs, and is rendered conspicuous by its pale whitish-green colour, often tinged with red. The places it covers can seldom be walked upon with safety; and





*Seed and Pod of the same*





## SPHAGNUM squarrosum.

*Prominent-leaved Bog-moss.**CRYPTOGAMIA Muci.*

GEN. CHAR. *Caps.* without a fringe. *Veil* cut round, its base remaining on the base of the capsule. *Antheræ* surrounded with a ring.

SPEC. CHAR. Branches bent downwards, tapering. Leaves ovate, acute, with recurved, prominent, keeled points.

SYN. *Sphagnum squarrosum.* *Mohr. Ind. 2.*

NO author, as far as we are informed, has described this *Sphagnum*. It is merely mentioned in Mr. Mohr's *Index Musei Plant. Crypt.* by the above name, under which denomination we formerly received specimens gathered in *Hercynia* by our late much esteemed friend Dr. H. A. Noehden of









SPHAGNUM capillifolium.

*Slender Bog-moss.*

CRYPTOGAMIA Musci.

GEN. CHAR. Caps. without a fringe. Veil cut round, its base remaining on the base of the capsule. Antheræ surrounded with a ring.

SPEC. CHAR. Branches slender, bent downward. Leaves ovato-lanceolate, pointed, flattish, close-pressed.

SYN. Sphagnum capillifolium. Hedw. Sp. Musc. 28. Sm. Fl. Brit. 1146. Turn. Musc. Hibern. 6.

S. palustre β. Linn. Sp. Pl. 1569. Huds. 465. Wüh. 788. Hull. 245.

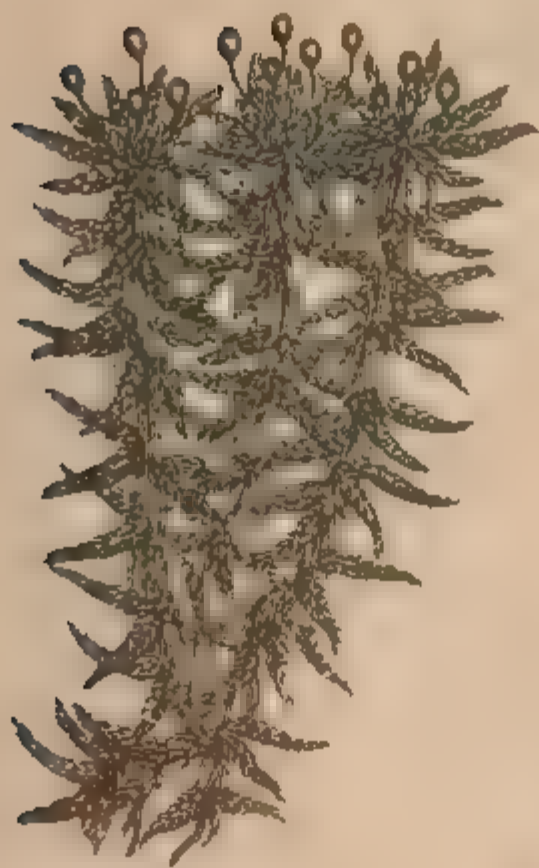
S. palustre molle deflexum, squamis capillaceis. Dill. Musc. 248. t. 32. f. 2. A.

S. cauliferum et ramosum palustre molle candicans, reflexis ramulis, foliis angustioribus. Dill. in Raii Syn. 104.

NOT less abundant than the foregoing on bogs in rather mountainous places, and bearing fruit at the same season. It agrees with that in colour, but is more frequently tinged red, especially when in a dwarf state. The branches are much more slender, and generally more pendulous; at least the very slender close-pressed branches are in this species more numerous. The leaves afford a most certain distinction, being smaller, narrower, almost flat, tipped with a sharp point which varies in length. Capsule ovate, its stalk generally longer than in the last.

Mr. J. Sowerby has observed the reticulations of the leaves to be very different from those of the preceding, the little transverse veins running in pairs. A fold or keel like a nerve is frequently perceptible.

1906



*Cladonia rangiferina* (L.) C. N. S.





**SPHAGNUM cuspidatum.**

*Long-leaved Floating Bog-moss.*

---

*CRYPTOGAMIA Musci.*

**GEN. CHAR.** *Caps.* sessile, without a fringe. *Veil* cut round, its base remaining on the base of the capsule. *Anthers* surrounded with a ring.

**SPEC. CHAR.** Branches spreading rather downwards. Leaves lanceolate, long-pointed, waved, lax.

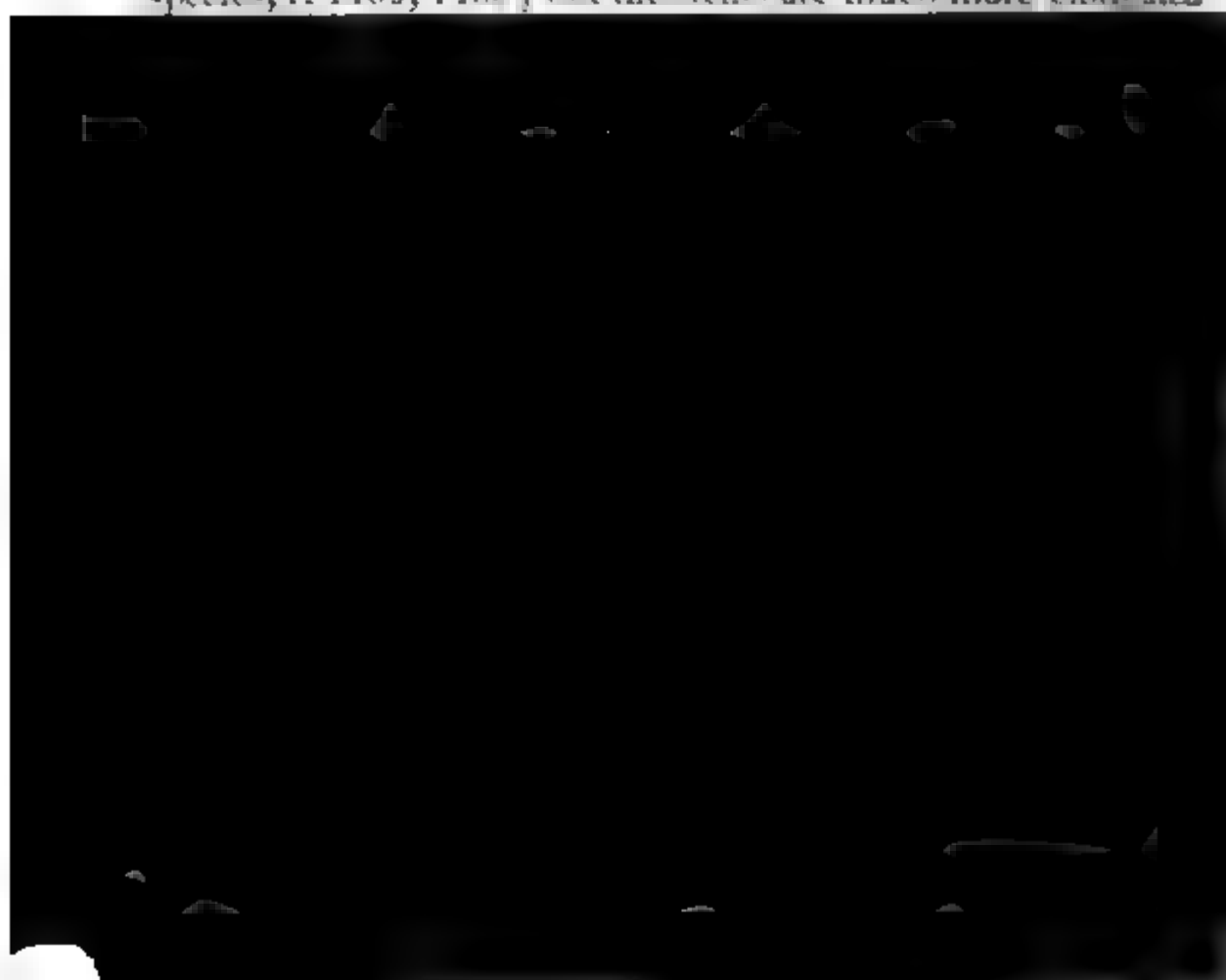
**SYN.** *Sphagnum cuspidatum.* Hoffm. *Germ.* v. 2. 22. Sm. *Fl. Brit.* 1147. Ehrh. *Crypt.* 251. Turn. *Musc. Hib.* 6.

*S. palustris mollis deflexi, squamis capillaceis, varietas fluitans.* Dill. *Musc.* 244. t. 32. f. 2. B.

---

**MOST** usual in mountainous countries, but Mr. Turner gathered our specimen near Yarmouth. It grows floating in pools and rivulets, bearing capsules in the middle of summer. For one of these, being of rare occurrence, we have had recourse to a German specimen.

The colour is a pale greenish grey, like the more common species, *t.* 1403, 1406; but the stems are much more elongated



2092. v









[ 1596 ]

**BUXBAUMIA** aphylla.  
*Naked-stalked Buxbaumia.*

---

**CRYPTOGAMIA** Musci.

**GEN. CHAR.** Capsule ovate, oblique, gibbous on one side.

*Outer fringe obsolete: inner membranous, plaited.*

**SPEC. CHAR.** Capsule on a granulated stalk, rising from a hairy bulb.

**SYN.** *Buxbaumia aphylla.* Linn. *Sp. Pl.* 1570. Turn.

*Musc. Hib.* 104. Wade *Pl. Rar. Hib. cum Ic.*

*Fl. Dan.* t. 44. Ehrh. *Phyt.* 10.

**B. caulescens.** Schmid. *Buxb.* 25. t. 1. f. 1—25.

*Muscus capillaceus aphyllus, capitulo crasso bivalvi.*

*Buxb. Cent.* 2. 8. t. 4. f. 2. Dill. *Musc.* 477.

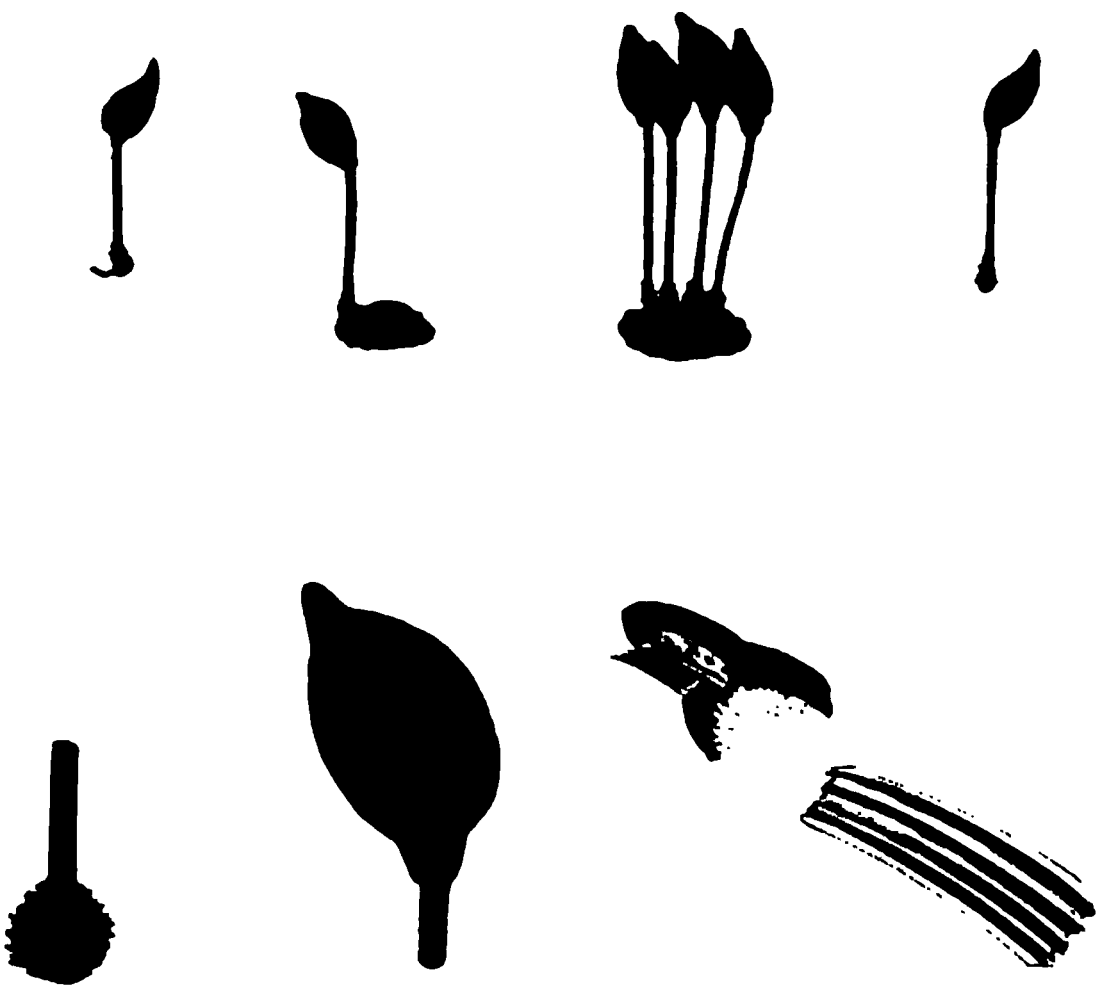
t. 68. f. 5.

---

**THIS** curious moss, discovered by Buxbaum near Astracan, and since found in Sweden, Germany and Switzerland, was first mentioned as a native of Ireland by Dr. Wade. No one had observed it in Britain, though it might reasonably be expected here, till Mr. William Jackson Hooker, a young naturalist of great promise, brought me growing specimens, towards the end of December 1805, from a plantation at Sprowston, not 3 miles from Norwich on the borders of Moushold heath, where the soil is of a turfy and sandy nature. About half a score plants only have as yet been detected, though some of the most acute botanists of my acquaintance have been at the spot.

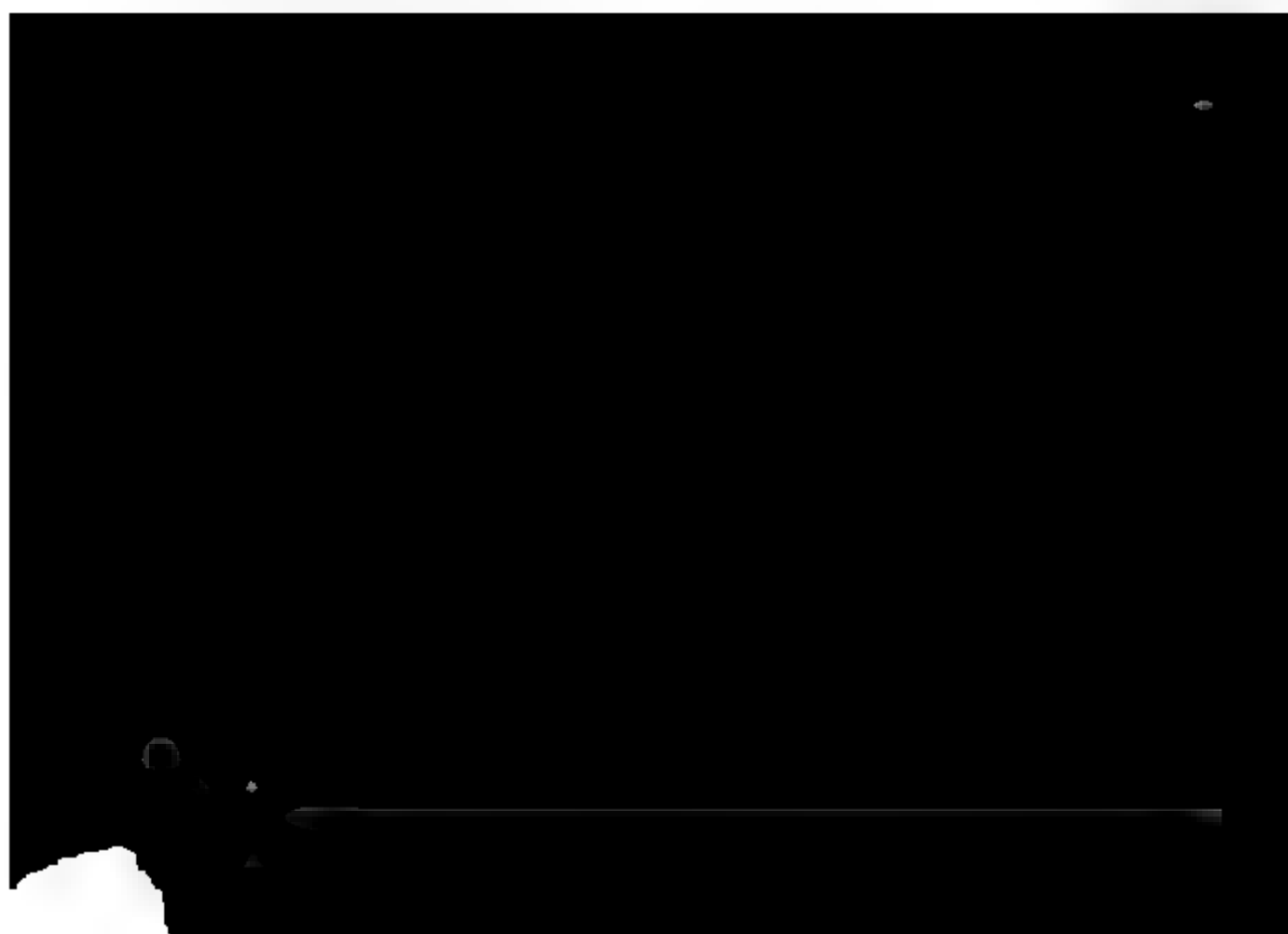
The root is presumed to be annual, and bears a bulb or knob clothed with brown hairs, which are perhaps equivalent to leaves, and among which the stamina are naturally to be expected, but no one has yet observed them. From this bulb rises a solitary, red, granulated, simple stalk, half an inch or more in height, bearing an elliptical oblique shining capsule, more or less green or red, the upper side of which shows the seeds through a semitransparent coat, the cavity in which they are lodged being oblique and lateral. The veil we have not seen. The lid is red, conical, short and obtuse. Inner fringe a plaited undivided membrane: outer, as figured by Hedwig, of 16 short blunt teeth, which look like the lacerated remains of the lid, and which do not appear in our specimens. Schumacher's exquisite figures countenance our ideas on this subject.

1596



May 1 1896 Published by J. F. Kennedy, Boston

v





BUXBAUMIA foliosa.

*Leafy Buxbaumia.*

---

CRYPTOGAMIA Musci.

GEN. CHAR. Capsule oblique, membranous on one side, gibbous on the other, with a lid. Veil deciduous.

SPEC. CHAR. Stem none. Capsule nearly sessile, surrounded with leaves.

SYN. Buxbaumia foliosa. Linn. Fil. Meth. Musc. 33. t. 1. f. 4. With. Bot. Arr. v. 3. 77. Dicks. H. Sicc. fasc. 2. 20.

Phascum montanum. Huds. Fl. An. 466.

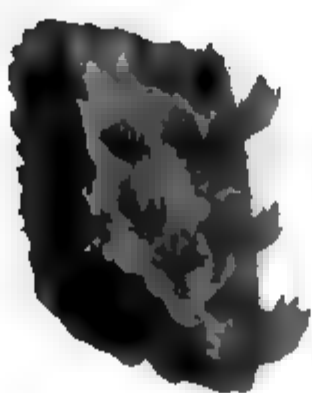
P. maximum. Lightf. Scot. 693.

Sphagnum acaulon maximum, foliis in centro ciliatis. Dill. Musc. 253. t. 32. f. 13.

---

OUR specimens of this rare moss were gathered by T. F. Forster, jun. Esq. in September 1794, on the rocks near Ham-sil forge (commonly called Harrison's rocks), and on Eridge rocks, Sussex, near Tunbridge-Wells.

It grows in little patches on the upright stone, but each plant is separate from the rest, consisting of several erect leaves, the inner ones long-pointed, embracing a solitary nearly sessile capsule, which is oblique, the top pointing upwards; its orifice is ciliated with several white permanent teeth. Lid conical, with a little constriction in the middle. The veil we have not seen. The obliquity of the capsule forms its most obvious generic character.









PHASCUM subulatum.

*Awl-leaved Earth-moss.*

CRYPTOGAMIA Musci.

GEN. CHAR. Capsule ovate, without any separate lid, deciduous. Veil minute, deciduous.

SPEC. CHAR. Stem simple. Capsule on a short stalk. Leaves awlshaped, spreading; dilated at the base; capillary at the point.

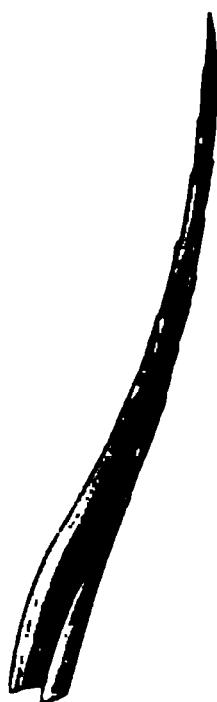
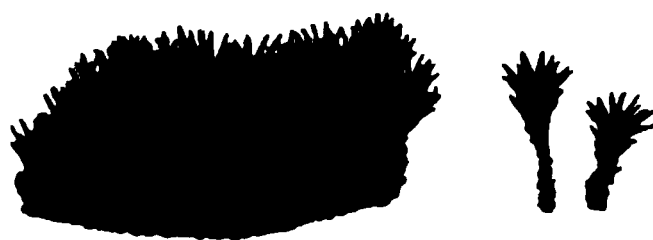
SYN. Phascum subulatum. Linn. Sp. Pl. 1570. Sm. Fl. Brit. 1149. Hedw. Sp. Musc. 19. Crypt. v. 1. 93. t. 35. Huds. 466. With. 785. Hull. 251. Relh. 412. Sibth. 272. Abbot. 229. Curt. Lond. fasc. 4. t. 67. Ehrh. Crypt. 182. Turn. Musc. Hb. 1.

Sphagnum acaulon trichodes. Dill. Musc. 251. t. 32. f. 10.

FREQUENT and abundant in shady hollows of sandy banks in woods or on heaths, bearing fruit in the early spring.

The roots are fibrous and annual. Plants forming rather loose velvet-like patches, of a lightish green hue. Stem scarcely one eighth of an inch high, simple, leafy, throwing out roots from the lower part. Leaves imbricated, numerous, spreading, awlshaped, entire, dilated and concave at the base, tapering and somewhat toothed at the point, single-ribbed. Capsule solitary, erect, brown and shining, elliptic-ovate, on a short stalk; the point pale or yellowish.

2177





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[ 1036 ]

PHASCUM axillare.  
*Lateral-fruited Earth-Moss.*

---

CRYPTOGAMIA Musci.

SPEC. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

SPEC. CHAR. Stem simple, leafy. Leaves awl-shaped, keeled, spreading. Fruit-stalk lateral. Capsule elliptical, drooping.

SYN. *Phascum axillare*. *Dickf. Crypt. fasc. 1. 2. t. 1. f. 3.*

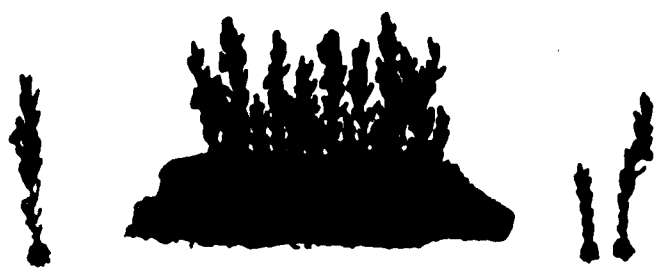
*P. nitidum*. *Hedw. Crypt. v. 1. 91. t. 34. Sp. Musc. 19. Witb. 787. Hull. 252.*

---

FIRST discovered by Mr. Dickson in moist places upon heaths. We gathered these specimens in Kensington gardens early in March.

The root is fibrous. Stem solitary, simple, leafy, flowering when about a line in height; but being immediately extended





*June 1 1802. Published by J. Sowerby, London.*







[ 1279 ]

**PHASCUM patens.**  
*Spreading Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

**SPEC. CHAR.** Stem short. *Capsule* globular. Leaves lanceolate, spreading, serrated towards the top.

**SYN.** *Phascum patens.* *Hedw. Sp. Musc.* 20. *Crypt.* v. 1. 28. t. 10. *Sm. Fl. Brit.* 1150. *Roth. Germ.* v. 3. 112. *Dicks. Crypt. fasc.* 4. 2.

β. *P. recurvifolium.* *Dicks. Crypt. fasc.* 4. 1. t. 10. f. 2.

---

**SPECIMENS** of this little moss have been sent us by Mr. Templeton from Ireland. They were found in August 1800, in a dry drain. It has already been observed in England, on a clay soil in shady places.

The plants grow together in great numbers, but not closely



1279



March 1. 1804. Published by J. G. Sowerby, London.





**PHASCUM strictum.**

*Upright Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

**SPER. CHAR.** Stem very short. *Capsule* ovate. Leaves awl-shaped, upright, straight, slightly serrated.

**SYN.** *Phascum strictum.* *Dicks. Crypt. fasc. 4. 1. t. 10. f. 1. Sm. Fl. Brit. 1151.*

---

**MR. DICKSON** only seems to have gathered this species of the minute genus *Phascum*, and we are obliged to him for the specimens described in the *Flora Britannica*, and delineated here. He mentions alpine bogs in Scotland as its native station.

The root is annual, fibrous, tufted. Plants not a line in









[ 1888 ]

**PHASCUM piliferum.**

*Bearded Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

**SPEC. CHAR.** Stem simple or branched. Leaves ovate-oblong, erect, tipped with a bristle. Capsule globose, upright.

**SYN.** *Phascum piliferum.* Schreb. *Phasc.* 8. t. 1. f. 6—10. Sm. *Fl. Brit.* 1151. Hedr. *Sp. Musc.* 20. Dicks. *Crypt. fasc.* 2. 1. Hull. 252.

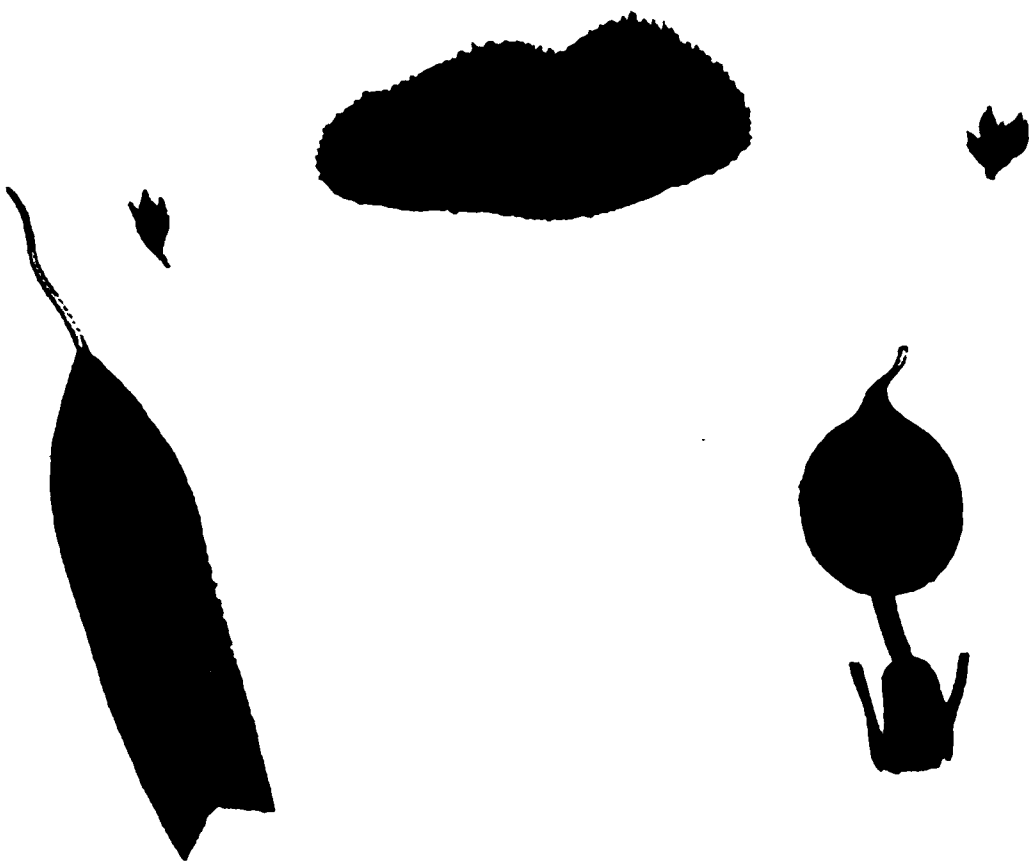
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**FOUND** in barren places among short grass. Mr. Dickson first observed it near London. Mr. G. Don sent it from near Forfar in North Britain. It is annual, bearing capsules in the early spring, after which it entirely disappears till the

following year. Schreber says it reappears in the autumn.



1888



*May 1888. Published by J. S. Sowerby, London.*





[ 1680 ]

PHASCUM crispum.  
Curled-leaved Earth-moss.

---

CRYPTOGAMIA Musci.

GEN. CHAR. Capsule ovate, without any separate lid, deciduous. Veil minute, deciduous.

SPEC. CHAR. Stem branched. Stem-leaves very small, alternate; the floral ones awlshaped, curled and twisted when dry. Capsules several.

SYN. Phascum crispum. Hedw. Sp. Musc. 21. Crypt. r. 1. 25. t. 9. Sm. Fl. Brit. 1151. Dicks. Crypt. fasc. 4. 2. Turn. Musc. Hib. 2.

---

GATHERED near Bedford by the Rev. Dr. Abbot, and communicated to Mr. Sowerby in January 1805. It is annual, bearing fruit in the winter or early spring.

The stems grow in tufts, and are mostly branched, spreading, leafy, about a quarter of an inch high. Leaves light green, often yellowish, entire; the lower ones extremely small, alternate, lanceolate, concave; the upper ones gradually larger and closer: the floral leaves much the largest, clustered, single-ribbed, long-pointed, much curled and twisted when dry; dilated and pale at the base. Capsules few, terminal, nearly sessile, erect, elliptical, with a little oblique point, brown when ripe. Veil with a longish summit.

This being now ascertained as the true *Phascum crispum*, it is necessary to apply the following synonyms and character to our tab. 618.

---

PHASCUM multicapsulare.  
Many-fruited Earth-moss.

---

SPEC. CHAR. Stem branched. Stem-leaves alternate; the floral ones linear-lanceolate, straight. Capsules numerous.

SYN. Phascum multicapsulare. Sm. Fl. Brit. 1152.

Ph. sphærocarpon. Abbot. 230.

Ph. crispum. Swartz. Musc. Suec. 17.

---

THIS is commonly of a duller green, and has much more numerous capsules. The floral leaves are more lanceolate, not contracting suddenly, and do not curl in the same manner by drying.

1680



*Det. and Publ. by J. S. Sowerby London*







*Curled Clustered Phascum.*

## CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate, without any separate lid.  
*Veil* minute, deciduous.

SPEC. CHAR. Stem-leaves minute, scattered; floral-leaves clustered, elongated, pointed, incurved, entire.

SYN. *Phascum crispum.* Hedw. *Musc.* v. 1. t. 9.

DISCOVERED at Ampthill, Bedfordshire, in March 1799, by the Rev. Mr. Abbot, to whom we are obliged for this specimen.

From Hedwig's excellent figure and description, there can be no doubt of its being his *P. crispum*, though he describes some of the floral leaves more incurved and contorted than we have found them.

This little moss grows in rather fertile places, especially (as Hedwig says) upon old mole-hills. It flowers in the beginning of winter, and ripens its capsules, with us at least, in April.

The roots are fibrous and much branched. Stems about a quarter of an inch high, simple or branched, spreading, clothed with minute, scattered, entire leaves, and crowned with a thick tuft of much longer, taper-pointed leaves, whose points are often incurved or contorted, especially when dry. The numerous capsules stand almost sessile among these long leaves, and are elliptical, with a minute beak, and a slender tapering veil.



*Gracilariopsis* sp. nov.





**PHASCUM curvicollum.**  
*Crooked-stalked Earth-Moss.*

*CRYPTOGAMIA Musci.*

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

**SPEC. CHAR.** Stem none. Leaves lanceolate, bearded, spreading. *Capsule* elliptical, terminal, on a recurved stalk.

**SYN.** *Phascum curvicollum.* Hedw. *Crypt.* v. 1. 31. t. 11. Dickf. *Crypt. fasc.* 2. 1. H. Sicc. *fasc.* 4. 20. Witb. 786. Hull. 252. Schrad. *Spicil.* 58.

**FOUND** on dry grassy spots near Croydon by Mr. Dickson, to whom we are obliged for this specimen.

It grows in patches. The root is formed of numerous fibres. Leaves all radical, lanceolate, entire, furnished with a red prominent midrib, which terminates in a taper beard or *arista*. From the centre of the leaves springs a solitary naked stalk, about their own length, brownish, soon becoming recurved, so as to bury in the earth the fruit it bears, which is a small brown capsule, exactly elliptical, terminated by a short slightly oblique point. The veil is short and conical, soon falling off.

The ripe capsule is to be found about May.

Having in our 5th volume unluckily mistaken another plant for this, which with regard to such minute objects it is hoped may be pardoned, we would wish to change the synonyms and characters given at t. 330, for the following.



015



July 1851. Published by J. H. Kew, London







**PHASCUM curvicolium.**  
*Crinked Phascum.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule with a lid, the mouth ciliated.*  
*Veil minute, deciduous.*

**SPEC. CHAR.** Stem none. Capsules on curved stalks.  
Leaves ovato-lanceolate, acuminate, spreading.

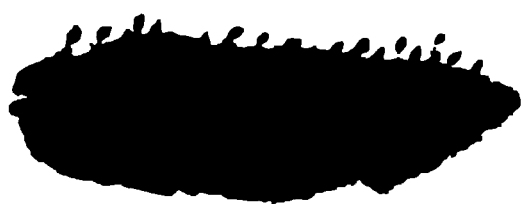
**SYN.** *Phascum curvicolium.* Dicks. *Crypt. fasc.* 2. 1.  
*With. Bot. Arr. v.* 3. 73. *Relh. Cant. fasc.* 3. 8.

---

**GATHERED** by the Rev. Mr. Hemsted on a dry bank near Newmarket; Mr. Dickson found it on barren grassy spots near Croydon. It ripens its fruit in April or May, and may probably be not uncommon, though so minute as to be rarely perceived.

Each plant is simple, with a fibrous root, a few lanceolate,









[ 1280 ]

**PHASCUM bryoides.**

*Tall Earth-moss.*

---

**CRYPTOGAMA Mori.**

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Fert* minute, deciduous.

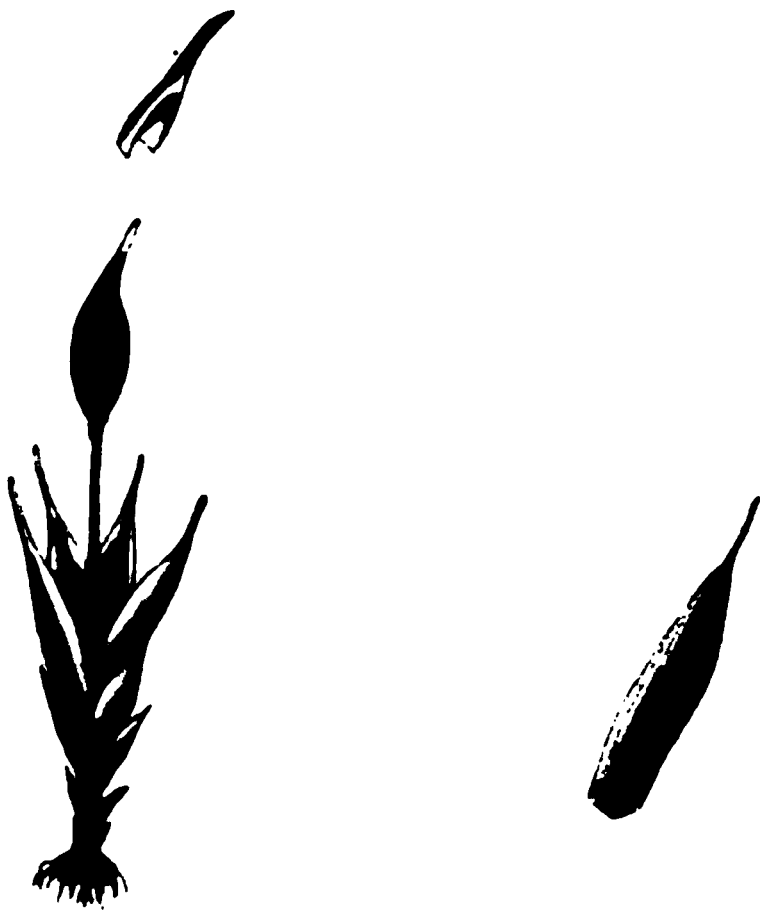
**SPEC. CHAR.** Stem simple. Leaves ovate, hair-pointed, upright. Capsule elliptical, beaked. Fruit-stalk erect, straight.

**SYN.** *Phascum bryoides*. Dicks. *Crypt. fasc.* 4. S. t. 10. f. 3. Sm. *FL Brit.* 1154.

---

**FOR** this singular *Phascum*, whose long stalk gives it so much the appearance of a *Bryum*, we are obliged to the Rev. Dr. Abbot, who found it at Clapham springs, Bedfordshire. Mr. Dickson mentions "heaths and woods" as its natural places of growth, without specifying any particular spot. It is annual, opening its fruit in the spring.





March 1 1900. Received of J. W. Edwards, London.

THE  
JOURNAL OF THE  
ROYAL ANTHROPOLOGICAL INSTITUTE  
OF GREAT BRITAIN AND IRELAND  
VOLUME LXXII PART II  
1902

1





[ 2259 ]

## PHASCUM curvisetum.

*Short bent-stalked Earth-moss.*

---

CRYPTOGAMIA Musci.

GEN. CHAR. Capsule ovate, without any separate lid, deciduous. Veil minute, deciduous.

SPEC. CHAR. Stem very short, nearly simple. Leaves oblong, hair-pointed. Capsule globose. Fruit-stalk very short, bent.

SYN. Phascum curvisetum. Dicks. Crypt. fasc. 4. 2. t. 10. f. 4. Sm. Fl. Brit. 1154. Turn. Musc. Hib. 3.

---

**FOUND** by Mr. Dickson in cultivated ground near Croydon, Surrey, in the early spring. The Rev. Dr. Abbot informs us he has gathered the same near Bedford.

The little short stems, sometimes, though rarely, divided, grow in tufts, overtopped by their crowded, ovate-oblong, concave, entire leaves, which stand almost upright, and have each a keel formed by a mid-rib, terminating in a short hair. Fruitstalks terminal, solitary, very short, and soon bent to one side with an angle. Capsule globose with something of a point, smooth, red brown, not rising so high as the leaves, but turned to one side. The veil is whitish, deeply torn, soon cast off, as in others of the genus, because of its own narrow dimensions, and the very tumid capsule.

This is nearly related to *P. cuspidatum*, t. 2025, and still more nearly perhaps to *Schreberianum*, t. 2026, but we believe all the three to be distinct.

2259



*... ..*





**PHASCUM cuspidatum.**  
*Sharp-leaved Dwarf Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** Capsule ovate, without any separate lid, deciduous. Veil minute, deciduous.

**SPEC. CHAR.** Stem slight. Leaves ovate, concave, hair-pointed; the upper ones folding over each other. Capsule broad-oval, nearly sessile.

**SYN.** Phascum cuspidatum. *Hedw. Sp. Musc.* 22. *Sm. Fl. Brit.* 1155. *Relh.* 413. *Sibth.* 273. *Abbt.* 229. *Ehrh. Crypt.* 162. *Turn. Musc. Hib.* 3.

*P. acaulon.* *Linn. Sp. Pl.* 1570, a. *Huds.* 466, a. *With.* 784. *Hull.* 251. *Curt. Lond. fasc.* 4. t. 66. *Fl. Dan.* t. 249. f. 3.

*Sphagnum acaulon bulbiforme majus.* *Dill. Musc.* 251. t. 32. f. 11.

*S. acaulon, foliis in bulbi formam congestis, majus.* *Raii Syn.* 105.

---

**COMMON** on sandy or gravelly banks, heaths or neglected

2025



*June 1 (1899) published by J. L. Laverdy, London*







**PHASCUM Schreberianum.**  
*Schreberian Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** Capsule ovate, without any separate lid,  
 - deciduous. *Feil* minute, deciduous.

**SPEC. CHAR.** Stem elongated and branched. Leaves  
 oblong, flatish, hair-pointed, erect. Capsule glo-  
 bose, nearly sessile.

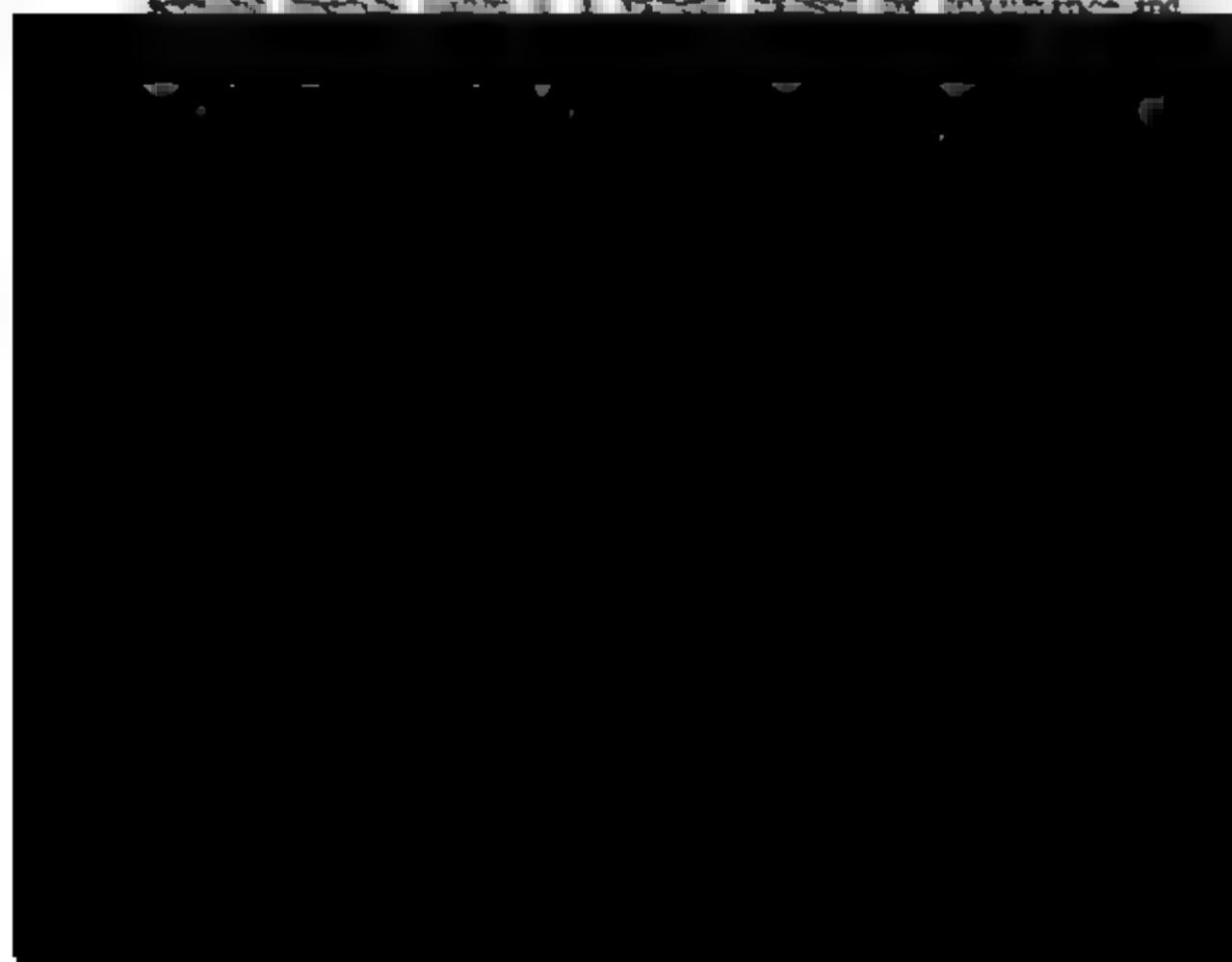
**SYN.** *Phascum Schreberianum*. *Dicks. Crypt. fasc. 4. 2.*  
*Sm. Fl. Brit. 1155.*

*P. cuspidatum*. *Schreb. Phasc. 8. t. 1. f. 1—5*, ex-  
 clusive of the quotation of *Dillenius*, which belongs  
 to our *t. 2025*.

---

**COMMUNICATED** by Mr. William Beckhouse, from wet  
 barren fields near Darlington, in the spring. Mr. Dickson  
 first distinguished this from the moss in our preceding plate,  
 from which it seems distinct, though some of our most ob-

servations have been made by Mr. Beckhouse and





*For a complete list of the plants of the*



.



## P H A S C U M muticum.

*Common Dwarf Earth-moss.*

## CRYPTOGAMIA Musci.

GEN. CHAR. Capsule ovate, without any separate lid, deciduous. Veil minute, deciduous.

SPEC. CHAR. Stem none. Leaves ovate, concave, closely imbricated, beardless; the upper ones serrated towards the point. Capsule globose, nearly sessile.

SYN. Phascum muticum. Schreb. Phasc. 8. t. 1. f. 11—14. Sm. Fl. Brit. 1156. Linn. MSS. in Sp. Pl. 1570. Hedw. Sp. Musc. 23. With. 784. Hall. 251. Ehrh. Crypt. 172. Turn. Musc. Hib. 3.

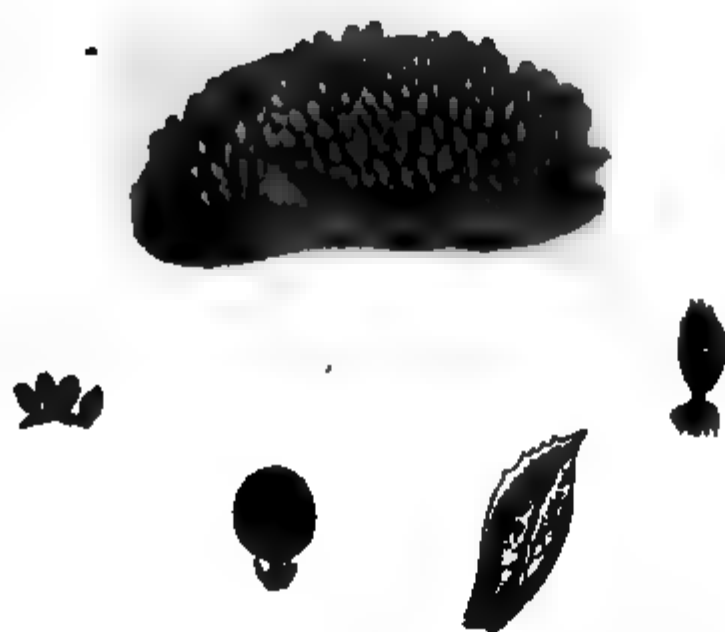
P. acaulon  $\beta$ . Linn. Sp. Pl. 1570. Huds. 466.

Sphagnum acaulon bulbiforme minus. Dill. Musc. 252. t. 32. f. 12.

S. acaulon, foliis in bulbi formam congestis, minus. Dill. in Raii Syn. 105.

VERY common upon sandy banks and heaths in winter and early spring. It is an extremely small species, though larger

2027



*Enceladus (p. 4) f. 1*

**THE UNIVERSITY OF CHICAGO**





PHASCUM ferratum.

*Serrated Phascum.*

CRYPTOGAMIA Moss.

GEN. CHAR. Capsule ovate, without any separate lid.  
Veil minute, deciduous.

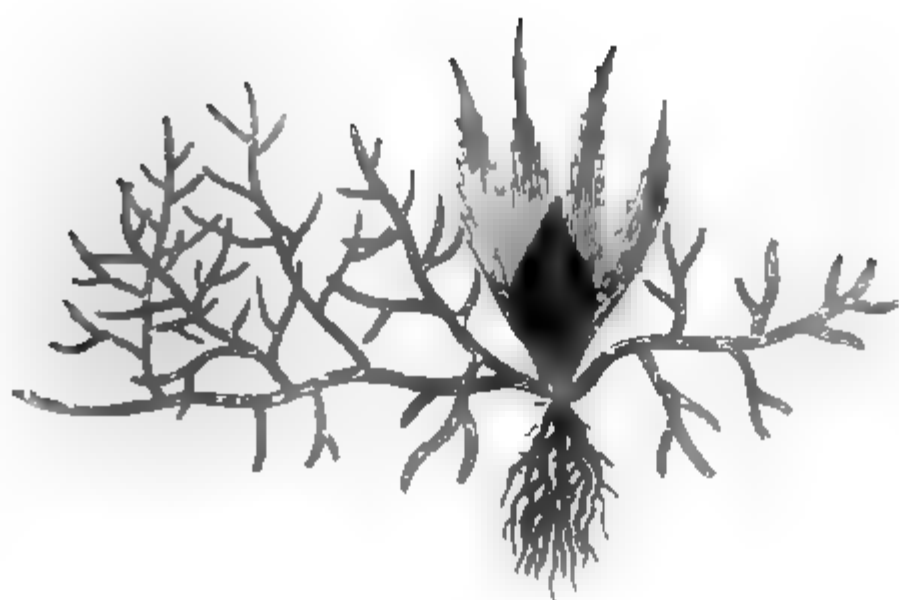
SPEC. CHAR. Shoots capillary, jointed, branched.  
Capsule surrounded with lanceolate serrated leaves  
rising above it.

SYN. Phascum ferratum. *Dicks. Crypt. fasc. 1. t. 1. f. 1.*  
*Wub. 785.*

THIS minute vegetable, hardly visible to the naked eye, was first discovered in England by Mr. Dickson, on the north side of Muswell-hill near Highgate. Our specimens were gathered in Cambridgeshire, by the Rev. Mr. Hemsted, in March last.

It forms tufts of pellucid green jointed filaments, very much resembling a *Byssus* at first sight, but, when highly magnified, as in our figure, assuming the appearance of a *Canferos*. From





1  
2  
3  
4  
5



**PHASCUM stoloniferum.**

*Branching-rooted Earth-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

**SPEC. CHAR.** Shoots creeping, jointed, branched. Leaves ovato-lanceolate, pointed, toothed.

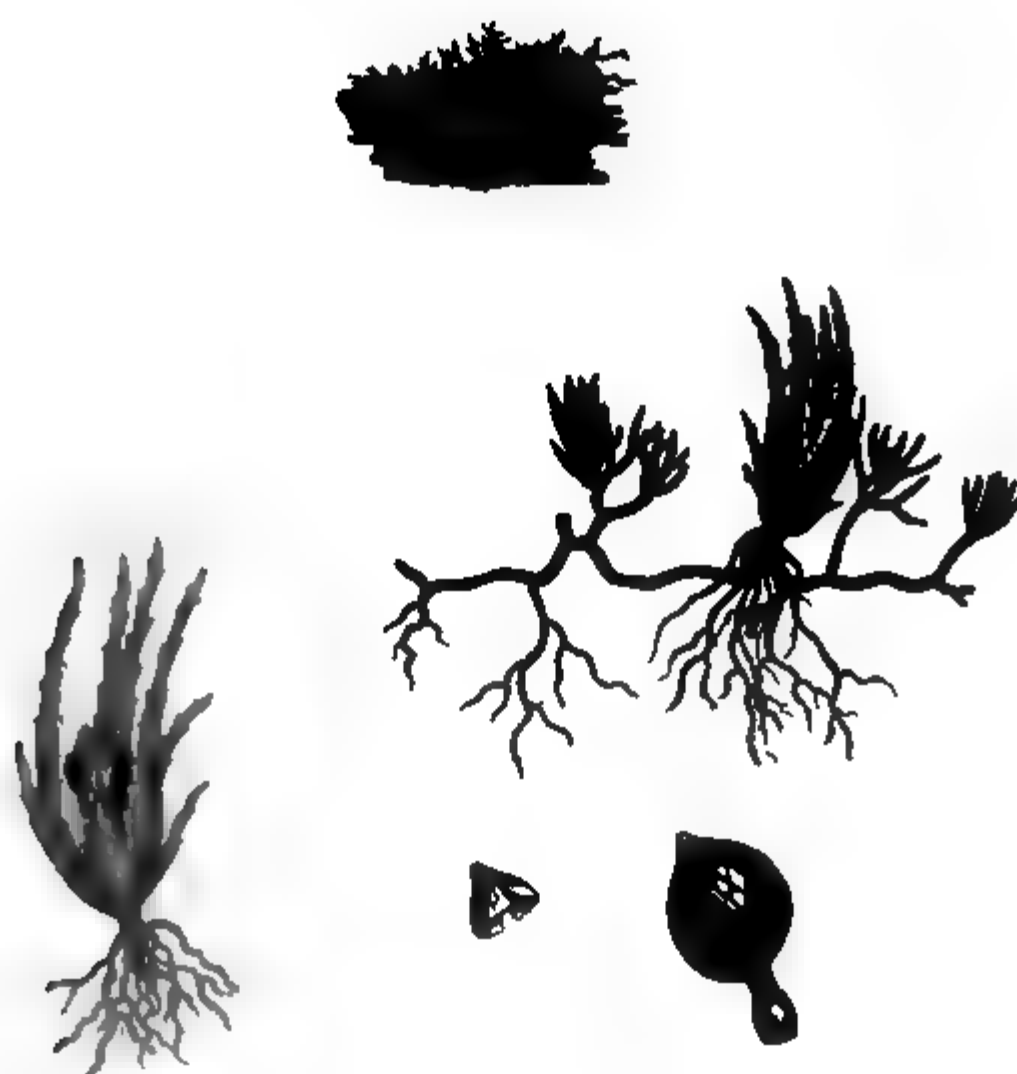
**SYN.** *Phascum stoloniferum.* Dicks. *Crypt. fasc.* 3. 1. t. 7. f. 2. Sm. *Fl. Brit.* 1157. Hedw. *Sp. Musc.* 24. With. 786. Hull. 252.

*Ph. serratum* β. Turn. *Musc. Hib.* 4.

---

**FIRST** discovered by Mr. E. Forster in the neighbourhood of Walthamstow. Our specimens were communicated by Mr. G. Don from Scotland. It grows on naked clay in damp places, and is presumed to be perennial. The capsules are

2106.



*Samolus nigriflorus* L. f. *Samolus* L.







**PHASCUM alternifolium.**  
*Alternate-leaved Earth-moss.*

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**CRYPTOGAMIA Musci.**

**GEN. CHAR.** Capsule ovate, without any separate lid, deciduous. *Feil* minute, deciduous.

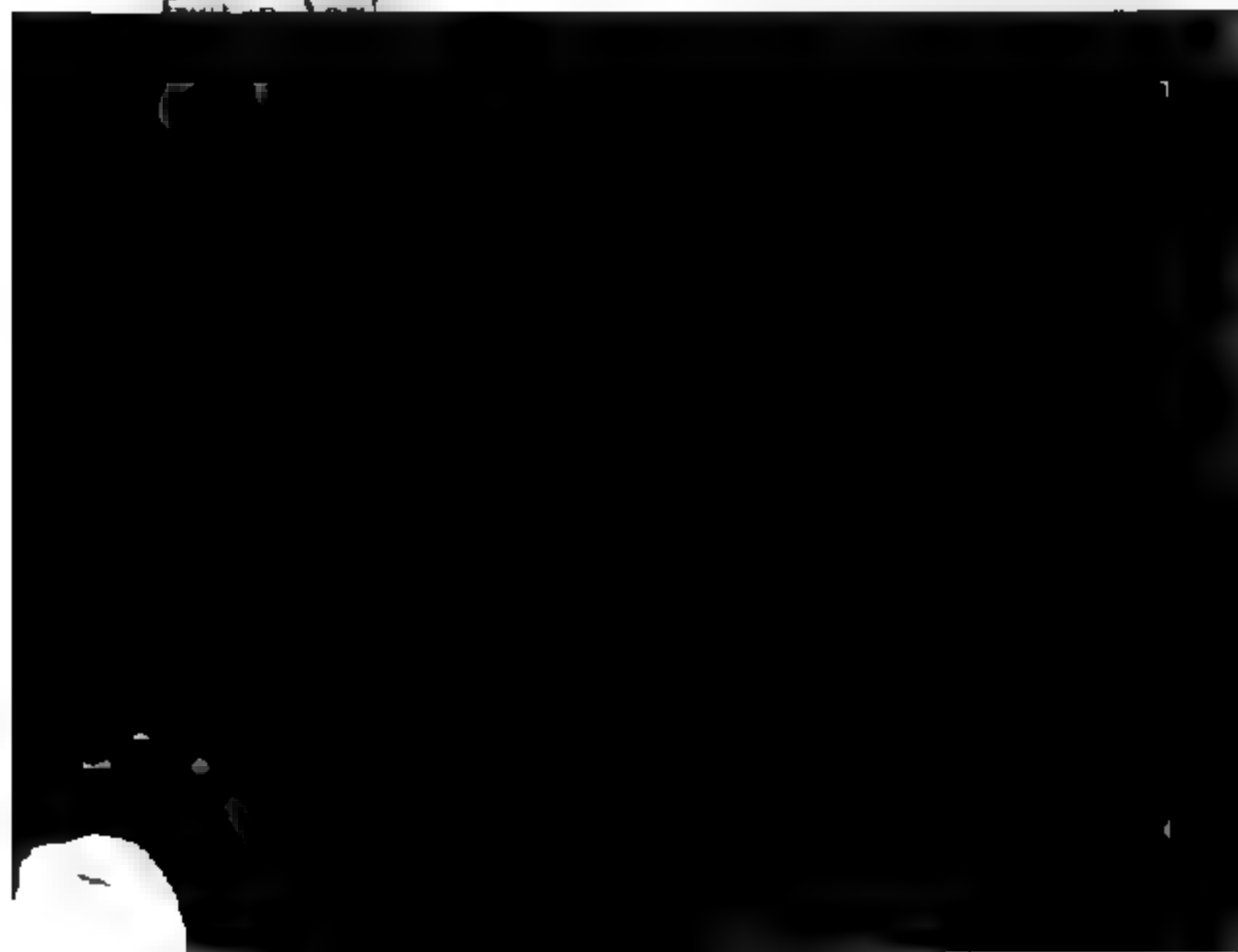
**SPEC. CHAR.** Stem branched. Branches simple; the barren ones longest and ascending. Leaves awl-shaped, alternate.

**SYN.** *Phascum alternifolium.* *Dicks. Crypt. fasc. 1. 2. t. 1. f. 2.* *Sm. Fl. Brit. 1157.* *Hedw. Sp. Musc. 24. Wijk. 736. Hall. 252. Relh. 413. Abbot. 229.*

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OUR specimens were gathered in moist spots upon Epping forest by Mr. E. Forster, but the plant has been found in various parts of the midland counties. It is annual, bearing

*Fructus April*





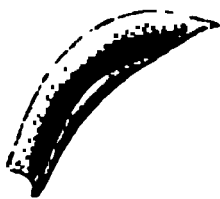
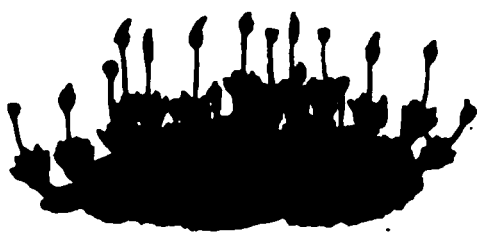




[ 1975 ]

**GYMNOSTOMUM truncatulum.***Little Blunt-fruited Beardless-moss.***CRYPTOGAMIA Musci.****GEN. CHAR.** Caps. without a fringe. Lid deciduous. Veil separating entire from the base.**SPEC. CHAR.** Leaves ovate, pointed, flat, entire. Capsule top-shaped, with a dilated mouth.**SYN.** *Gymnostomum truncatulum.* Hoffm. *Germ.* v. 2. 27. Sm. *Fl. Brit.* 1158. Sibth. 274. Turn. *Musc. Hib.* 7. t. 1. f. d—f.*G. truncatum.* Hedw. *Sp. Musc.* 90. *Crypt.* v. 1. 13. t. 5.*Bryum truncatulum.* Linn. *Sp. Pl.* 1584. Huds. 477. With. 818. Hull 258. Relh. 424. Abbot. 242. Curt. *Lond. fasc.* 2. t. 71.*B. exiguum, creberrimis capsulis rufis.* Dill. *Musc.* 347. t. 45. f. 7. F—K.*B. parvum, erectis subrotundis majusculis capitulis subfuscis, foliis serpilli pellucidis.* Dill. in *Rein Syn.* 93.**FREQUENT** about banks, dry ditches, and fallow fields, bearing fruit early in the spring.

1975



Printed in Great Britain by J. & J. W. Smith, London.







[ 1976 ]

GYMNOSTOMUM *intermedium*.*Longer Blunt-fruited Beardless-moss.*CRYPTOGAMIA *Muci*.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

SPEC. CHAR. Leaves ovato-lanceolate, pointed, flat,  
 entire. Capsule elliptic-oblong, obtuse.

SYN. *Gymnostomum intermedium*. Sm. *Fl. Brit.* 1159.  
*Turn. Musc. Hib.* 7. t. 1. f. a—c.

*Bryum truncatulum*. Ehrh. *Crypt.* 14.

*B. exiguum*, creberrimis capsulis rufis. Dill. *Musc.*  
 347. t. 43. f. 7. A—E.

*B. exiguum*, erectis parvis subrotundis creberrimis  
 capitulis rufis, foliis serpilli angustis pellucidis.  
 Dill. in *Raii Syn.* 94.

WHAT escaped the great Hedwig it may seem presumptuous to decide upon as obvious, and yet we cannot hesitate to consider this as a very distinct species from *G. truncatulum*, as Mr. Turner and Mr. Dickson have long ago done. Dillenius indeed discriminated them as varieties, but Mr. Turner thinks Hedwig confounded them entirely, and moreover that all his figures of *truncatulum*, except f. 12, belong to the present plant. To this we can scarcely assent, and we have sometimes presumed to doubt Mr. Turner's own figure of *intermedium*. However that may be, we are indebted to him for the specimens here delineated, which agree with our own.

This species is very common on heaths and banks, growing more in tufts than the preceding, which it also exceeds in size, and its colour is rather paler. The leaves are narrower, more incurved and closed together by drying, and the fruit-stalk is longer. The capsule is nearly elliptical, or rather truly ovate, without any dilatation of the mouth, and not by any means top-shaped. Lid scarcely half so long as the capsule, obtusely-pointed, slightly curved.—This moss varies considerably in size. Sometimes it is smaller than *G. obtusum*, t. 1407, sometimes larger, but the capsule is never so short and abrupt, the fruitstalk so strong and thick, nor the leaves so straight, or strongly ribbed.

**1976**

செய்து, 8 பிப்ரவரி, ஸ்ரீரங்கத்திலுள்ள ஸ்ரீரங்கம் கி. அ. ச. பள்ளிக்கு வந்தனர்.





**GYMNOSTOMUM obtusum.**

*Dark Beardless-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Leaves ovate-oblong, acute, flat, mostly entire. Capsule obovate, obtuse. Lid awl-shaped.

**SYN.** *Gymnostomum obtusum.* *Hedw. Sp. Musc. 34. t. 2. f. 1—3. Sm. Fl. Brit. 1159. Turn. Musc. Hibern. 9. t. 1. f. g—i.*

*Bryum obtusum.* *Dicks. Crypt. fasc. 2. 5. t. 4. f. 7. With. 811. Hull. 256.*

---

**THIS** little moss was found by Mr. Dickson, its original observer, on the highland rocks and stones of Scotland. It is not however confined to that country, but, thriving in a barren sandy soil, is extremely common about Yarmouth. We are obliged to Mr. Turner and Mr. Teesdale for specimens. The fruit ripens in June. The root is believed to be annual.

This is not quite so small as the common *G. truncatulum*. It grows like that in large patches, the stems being very short, and generally simple. Leaves oblong, inclining to ovate or elliptical, flat, acute, beardless, generally quite entire; sometimes we have thought them slightly toothed. They have a strong brownish midrib, but are otherwise of a dark dull green, turning pale and brownish by age. Fruit-stalk firm and rather stout for its short height, which is but little more than that of the stem, red, straight. Capsule red-brown, upright, obovate, or rather elliptical with a wide mouth, as if abruptly cut off. Lid very slightly convex, with an awl-shaped, curved, bluntish point, somewhat shorter than the capsule itself. Veil cylindrical, brownish.

One of Mr. Dickson's Scottish specimens has a more taper elongated fruit-stalk, and paler leaves, than ours generally bear.

1407



*Jan. 1888 Published by J. L. Gower, London*

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[ 1889 ]

## GYMNOSTOMUM ovatum.

*Hairy-leaved Beardless-moss.*

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CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

SPEC. CHAR. Leaves ovate, obtuse, entire, concave,  
 tipped with a bristle. Capsule ovate.

SYN. *Gymnostomum ovatum.* *Hedw. Sp. Musc.* 31.  
*Crypt. v. 1. 16. t. 6. Sm. Fl. Brit.* 1160. *Sibth.*  
 274. *Turn. Musc. Hib.* 9.

*Bryum ovatum.* *Dicks. Crypt. fasc.* 2. 4. *H. Sicc.*  
*fasc.* 3. 20. *With.* 811. *Hull.* 256. *Relh.* 424.  
*Abbot.* 240.

*Muscus coronatus minimus, foliolis et capitulis oblongis*  
*in pediculis brevissimis.* *Moris. v. 3. 631. sect. 15.*  
*t. 7. f. 18.*

---

FREQUENT enough on dry banks and mud walls, bearing









**GYMNOSTOMUM osmundaceum,**  
*Fern-leaved Beardless-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Stem perfectly simple, elongated; naked  
 at the base. Leaves acute, two-ranked. Capsule  
 roundish. Lid pointless.

**SYN.** *Gymnostomum osmundaceum.* Hoffm. Germ.  
 v. 2. 28. Sm. Fl. Brit. 1161.

*G. pennatum.* Hedw. Sp. Musc. 31, Crypt. v. 1. 77.  
 t. 29.

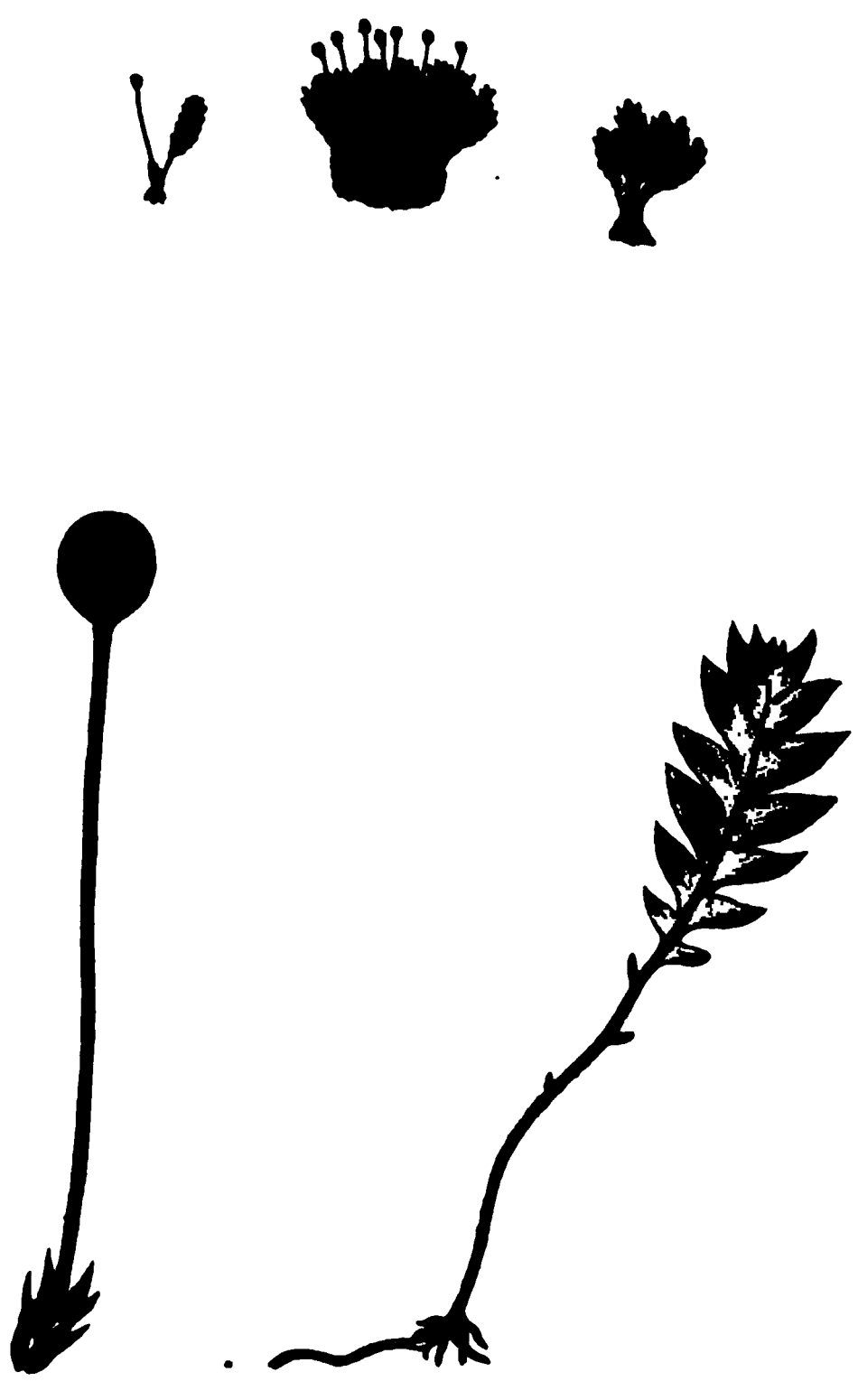
*Mnium osmundaceum.* Dicks. Crypt. fasc. 1. 3. t. 1.  
 f. 4. H. Sicc. fasc. 12. 21.

*Bryum pennatum.* With. 821. Hull, 259.

*Dicksonia pusilla.* Ehrh. Crypt. 65.

---

**NONE** of our British Mosses is more elegant, scarcely any  
 so rare as the present, which has been found in Devonshire  
 only, by the Rev. Mr. Newberry, in the road from Zele to  
 South Tawton church, four miles from Okehampton. It ripens  
 fruit in the early part of summer, and is annual, or, according  
 to Hedwig, biennial. This distinguished author changed the



*Fig. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.*







[ 1938 ]

## GYMNOSTOMUM Griffithianum.

*Succulent Beardless-moss.**CRYPTOGAMIA Musci.*

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

SPEC. CHAR. Leaves spatulate, obtuse, fleshy, with  
 a single rib. Capsule obovate. Lid blunt.

SYN. *Gymnostomum Griffithianum*. *Sm. Fl. Brit.* 1162.  
*Bryum Griffithianum*. *Dicks. Crypt. fasc.* 4. 8. t. 10.  
*f.* 10.

*Splachnum frelichianum*. *With.* 794. *Hull.* 246 ;  
 but not of Hedwig.

THE gentleman whose name this curious moss bears, and who sent our present specimens, first discovered it on the east side of Snowdon, near the summit. Mr. W. J. Hooker found it this summer very sparingly on Ben Lawers in Scotland, no other botanist than Mr. Griffith and Mr. Hooker having ever gathered the plant in any country.

Root fibrous, perhaps annual. Stems short, simple, or branched from the base, leafy. Leaves imbricated, palish, pellucid and succulent, obovate or spatulate, obtuse, wavy, entire, finely marked with round reticulations, and furnished with a central rib which does not reach the top. Fruitstalk solitary, terminal, succulent, curved. Capsule erect, obovate, brown, smooth. Lid convex, with a little blunt point. Veil conical, acute, brown, white at the base, tipped with the withered stigma. Some plants bear green terminal grain-like bodies, resembling the anthers of a *Sphagnum*.

1938



*Sept. 1938. Published by the Society, London.*

[ 1951 ]

## GYMNOSTOMUM Heimii.

*Long-stalked Beardless-moss.*

---

*CRYPTOGAMIA Musci.*

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

SPEC. CHAR. Leaves elliptic-lanceolate, acute, minutely serrated towards the point. Capsule cylindrical. Lid obliquely beaked.

SYN. *Gymnostomum Heimii.* Hedw. *Sp. Musc.* 32.  
*Crypt. v.* 1. 80. *t.* 30. Sm. *Fl. Brit.* 1162. Turn.  
*Musc. Hib.* 9.

*Bryum Heimii.* Dicks. *Crypt. fasc.* 2. 4. With. 815.  
Hull. 257.

---

OUR specimens of this uncommon moss were gathered in Anglesea by the Rev. H. Davies, bearing ripe capsules in May. Mr. G. Don has found the same species near Forfar, Angus-shire, and Mr. Turner in Ireland.

The roots are annual. Stems simple, forming dense tufts, scarcely half an inch high, leafy. Leaves of a light, often brownish, green, strongly reticulated, slightly spreading, elliptic-lanceolate, acute, flat, or somewhat carinated, with a prominent rib. Their margin minutely serrated about the point only, sometimes entire throughout, especially in the inner leaves. Fruitstalk solitary, terminal, about an inch long, yellow when young with a reddish base, at length brown. Capsule upright, brown, smooth, cylindrical with a widish mouth. Lid taper, oblique, rather shorter than the capsule, springing from a flat base, and attached by its centre to the *columella*, which, as usual in the genus, rises above the edge of the capsule.

7962



*See illustration of the same in London*





## GYMNOSTOMUM Donnianum.

*Donnia Beardless-moss.**CRYPTOGAMIA Musci*

GEN. CHAR. Caps. without a fringe. Lid deciduous.  
 Fr. separating entire from the base.

SPEC. CHAR. Stem none. Leaves bristle-shaped.  
 Capsule turbinate, smooth. Lid oblique, the length  
 of the capsule.

FOR the knowledge of this, one of the minutest of mosses, we are entirely obliged to Mr. G. Donn of Edinburgh, who first observed it in 1779, when he was a very young botanist, clothing the surface of a rock in the Den of Dupplin, Perthshire. He has repeatedly visited it in its native situation since, and found it in other parts of the same valley, but not in fructification. The season for the capsules is November, and the root is probably annual.

No stem is discernible. The leaves grow in either one or more clusters, nearly erect, bristle-shaped, beardless, sheathing one another at their base, of a full rich opaque green. Fruitstalk solitary, upright, capillary, yellowish, about a line high. Capsule erect, turbinate or topshaped, very minute, yellowish, opaque, quite smooth as if neatly turned out of box wood, tapering at the base, wide at the mouth, with the little column projecting in the centre as in several species of *Splachnum*. Fringe certainly none. Lid tapering, according to Mr. Donn, oblique, as long as the capsule.

The bristle-shaped leaves and long lid distinguish it from *G. Davallianum*, mentioned by Mr. Drake in the *Annals of Botany*, v. 1. 577, while the smooth and rounder capsule keeps it quite separate from *G. trichodes* of Mohr. It is indeed smaller than either of those species, and scarcely half the size of *Grimmia pusilla*, which at first sight it otherwise greatly resembles.









[ 1583 ]

## GYMNOSTOMUM viridissimum.

*Bright-green Branched Beardless-moss.*

## CRYPTOGAMIA Musci.

GEN. CHAR. Caps. without a fringe. Lid deciduous.  
*Veil* separating entire from the base.

SPEC. CHAR. Stem branched, tufted. Leaves crowded,  
 lanceolate, recurved. Capsule ovate, furrowed,  
 erect. Lid awlshaped, curved.

SYN. Dicranum viridissimum. Sm. *Fl. Brit.* 1224.  
*Turn. Musc. Hib.* 71. *Turn. and Dillw. Botanist's*  
*Guide*, 728.

Bryum viridissimum. *Dicks. Crypt. fasc.* 4. 9. t. 10.  
*f.* 18.

GATHERED on trees near Ripon, Yorkshire, by Mr. W. Brunton junior, to whom we are obliged for the final determination of its genus, about which there has been some dispute. I could not at first trace out the origin of my own mistake in *Fl. Brit.*, but I find the account of the *peristomium* was communicated by a very excellent friend, not there mentioned, who has few errors to correct. In this intricate department some must be expected from the most careful investigator; and the difficulty of proving a negative renders the determination of a *Gymnostomum* peculiarly hazardous.

This moss seems by the *Botanist's Guide* to be not very uncommon. Possibly it may have been overlooked for *Orthotrichum crispum*.

The stems form level-topped tufts about an inch high, and are more or less branched, leafy, rusty in their lower part. Leaves crowded, spreading (close-pressed and twisted when dry), lanceolate, acute, beardless, entire, keeled, single-ribbed, of a fine opaque bright green, turning at length to a rusty brown. Fruitstalks brown, half an inch long. Capsule erect, ovate, brown, at length furrowed and somewhat cylindrical, with a narrow naked mouth. Lid awlshaped, rather shorter than the capsule.

1583



... ..





[ 2200 ]

**GYMNOSTOMUM æruginosum.**

*Verdigrise Beardless-moss.*

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**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Stem branched, ~~erect~~. Leaves awl-shaped, keeled, entire. Capsule bell-shaped. Lid obliquely beaked.

**SYN.** *Gymnostomum æruginosum* Sm. *Fl. Brit.* 1163.  
*Bryum fasciculatum.* Dicks. *Crypt. fasc.* 3. 3; on his own authority. Mr. Eagle.

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**THE** specimens described in *Fl. Brit.* were gathered in North Wales by Mr. Griffith, and constitute the tallest tuft in our plate; the lower tuft, with the lid, was gathered by Mr. Eagle, F.L.S., on a wet rock in the north-west corner of Yorkshire, in August, 1806.

This moss Mr. Eagle assures us is certainly Mr. Dickson's



2200



collected by J. H. Sargent













22/0



reproduced by J. R. R. R. R.







**SECRET**

## STRENGTHENING

~~Excluded from the~~

**Abstract**

**Topic**      **Issue**      **Issue statement & focus**      **List decisions**

~~T is something more than the same.~~

~~Stem~~ ~~Leaves~~ ~~Stem~~ ~~translucent~~ ~~reddish~~ Leaves black-

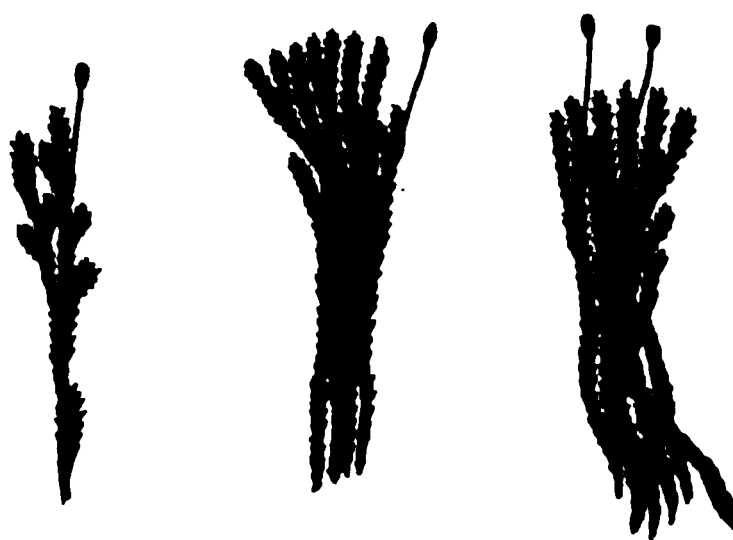
~~THE CHINESE GENERAL~~ **CHANGING COMPANY** Ltd. b-

**THESE** **THESES**

~~Sec.~~ ~~1-1~~ ~~1-2~~ ~~1-3~~ ~~1-4~~ ~~1-5~~ ~~1-6~~ ~~1-7~~ ~~1-8~~ ~~1-9~~ ~~1-10~~ ~~1-11~~ ~~1-12~~ ~~1-13~~ ~~1-14~~ ~~1-15~~ ~~1-16~~ ~~1-17~~ ~~1-18~~ ~~1-19~~ ~~1-20~~ ~~1-21~~ ~~1-22~~ ~~1-23~~ ~~1-24~~ ~~1-25~~ ~~1-26~~ ~~1-27~~ ~~1-28~~ ~~1-29~~ ~~1-30~~ ~~1-31~~ ~~1-32~~ ~~1-33~~ ~~1-34~~ ~~1-35~~ ~~1-36~~ ~~1-37~~ ~~1-38~~ ~~1-39~~ ~~1-40~~ ~~1-41~~ ~~1-42~~ ~~1-43~~ ~~1-44~~ ~~1-45~~ ~~1-46~~ ~~1-47~~ ~~1-48~~ ~~1-49~~ ~~1-50~~ ~~1-51~~ ~~1-52~~ ~~1-53~~ ~~1-54~~ ~~1-55~~ ~~1-56~~ ~~1-57~~ ~~1-58~~ ~~1-59~~ ~~1-60~~ ~~1-61~~ ~~1-62~~ ~~1-63~~ ~~1-64~~ ~~1-65~~ ~~1-66~~ ~~1-67~~ ~~1-68~~ ~~1-69~~ ~~1-70~~ ~~1-71~~ ~~1-72~~ ~~1-73~~ ~~1-74~~ ~~1-75~~ ~~1-76~~ ~~1-77~~ ~~1-78~~ ~~1-79~~ ~~1-80~~ ~~1-81~~ ~~1-82~~ ~~1-83~~ ~~1-84~~ ~~1-85~~ ~~1-86~~ ~~1-87~~ ~~1-88~~ ~~1-89~~ ~~1-90~~ ~~1-91~~ ~~1-92~~ ~~1-93~~ ~~1-94~~ ~~1-95~~ ~~1-96~~ ~~1-97~~ ~~1-98~~ ~~1-99~~ ~~1-100~~ ~~1-101~~ ~~1-102~~ ~~1-103~~ ~~1-104~~ ~~1-105~~ ~~1-106~~ ~~1-107~~ ~~1-108~~ ~~1-109~~ ~~1-110~~ ~~1-111~~ ~~1-112~~ ~~1-113~~ ~~1-114~~ ~~1-115~~ ~~1-116~~ ~~1-117~~ ~~1-118~~ ~~1-119~~ ~~1-120~~ ~~1-121~~ ~~1-122~~ ~~1-123~~ ~~1-124~~ ~~1-125~~ ~~1-126~~ ~~1-127~~ ~~1-128~~ ~~1-129~~ ~~1-130~~ ~~1-131~~ ~~1-132~~ ~~1-133~~ ~~1-134~~ ~~1-135~~ ~~1-136~~ ~~1-137~~ ~~1-138~~ ~~1-139~~ ~~1-140~~ ~~1-141~~ ~~1-142~~ ~~1-143~~ ~~1-144~~ ~~1-145~~ ~~1-146~~ ~~1-147~~ ~~1-148~~ ~~1-149~~ ~~1-150~~ ~~1-151~~ ~~1-152~~ ~~1-153~~ ~~1-154~~ ~~1-155~~ ~~1-156~~ ~~1-157~~ ~~1-158~~ ~~1-159~~ ~~1-160~~ ~~1-161~~ ~~1-162~~ ~~1-163~~ ~~1-164~~ ~~1-165~~ ~~1-166~~ ~~1-167~~ ~~1-168~~ ~~1-169~~ ~~1-170~~ ~~1-171~~ ~~1-172~~ ~~1-173~~ ~~1-174~~ ~~1-175~~ ~~1-176~~ ~~1-177~~ ~~1-178~~ ~~1-179~~ ~~1-180~~ ~~1-181~~ ~~1-182~~ ~~1-183~~ ~~1-184~~ ~~1-185~~ ~~1-186~~ ~~1-187~~ ~~1-188~~ ~~1-189~~ ~~1-190~~ ~~1-191~~ ~~1-192~~ ~~1-193~~ ~~1-194~~ ~~1-195~~ ~~1-196~~ ~~1-197~~ ~~1-198~~ ~~1-199~~ ~~1-200~~ ~~1-201~~ ~~1-202~~ ~~1-203~~ ~~1-204~~ ~~1-205~~ ~~1-206~~ ~~1-207~~ ~~1-208~~ ~~1-209~~ ~~1-210~~ ~~1-211~~ ~~1-212~~ ~~1-213~~ ~~1-214~~ ~~1-215~~ ~~1-216~~ ~~1-217~~ ~~1-218~~ ~~1-219~~ ~~1-220~~ ~~1-221~~ ~~1-222~~ ~~1-223~~ ~~1-224~~ ~~1-225~~ ~~1-226~~ ~~1-227~~ ~~1-228~~ ~~1-229~~ ~~1-230~~ ~~1-231~~ ~~1-232~~ ~~1-233~~ ~~1-234~~ ~~1-235~~ ~~1-236~~ ~~1-237~~ ~~1-238~~ ~~1-239~~ ~~1-240~~ ~~1-241~~ ~~1-242~~ ~~1-243~~ ~~1-244~~ ~~1-245~~ ~~1-246~~ ~~1-247~~ ~~1-248~~ ~~1-249~~ ~~1-250~~ ~~1-251~~ ~~1-252~~ ~~1-253~~ ~~1-254~~ ~~1-255~~ ~~1-256~~ ~~1-257~~ ~~1-258~~ ~~1-259~~ ~~1-260~~ ~~1-261~~ ~~1-262~~ ~~1-263~~ ~~1-264~~ ~~1-265~~ ~~1-266~~ ~~1-267~~ ~~1-268~~ ~~1-269~~ ~~1-270~~ ~~1-271~~ ~~1-272~~ ~~1-273~~ ~~1-274~~ ~~1-275~~ ~~1-276~~ ~~1-277~~ ~~1-278~~ ~~1-279~~ ~~1-280~~ ~~1-281~~ ~~1-282~~ ~~1-283~~ ~~1-284~~ ~~1-285~~ ~~1-286~~ ~~1-287~~ ~~1-288~~ ~~1-289~~ ~~1-290~~ ~~1-291~~ ~~1-292~~ ~~1-293~~ ~~1-294~~ ~~1-295~~ ~~1-296~~ ~~1-297~~ ~~1-298~~ ~~1-299~~ ~~1-300~~ ~~1-301~~ ~~1-302~~ ~~1-303~~ ~~1-304~~ ~~1-305~~ ~~1-306~~ ~~1-307~~ ~~1-308~~ ~~1-309~~ ~~1-310~~ ~~1-311~~ ~~1-312~~ ~~1-313~~ ~~1-314~~ ~~1-315~~ ~~1-316~~ ~~1-317~~ ~~1-318~~ ~~1-319~~ ~~1-320~~ ~~1-321~~ ~~1-322~~ ~~1-323~~ ~~1-324~~ ~~1-325~~ ~~1-326~~ ~~1-327~~ ~~1-328~~ ~~1-329~~ ~~1-330~~ ~~1-331~~ ~~1-332~~ ~~1-333~~ ~~1-334~~ ~~1-335~~ ~~1-336~~ ~~1-337~~ ~~1-338~~ ~~1-339~~ ~~1-340~~ ~~1-341~~ ~~1-342~~ ~~1-343~~ ~~1-344~~ ~~1-345~~ ~~1-346~~ ~~1-347~~ ~~1-348~~ ~~1-349~~ ~~1-350~~ ~~1-351~~ ~~1-352~~ ~~1-353~~ ~~1-354~~ ~~1-355~~ ~~1-356~~ ~~1-357~~ ~~1-358~~ ~~1-359~~ ~~1-360~~ ~~1-361~~ ~~1-362~~ ~~1-363~~ ~~1-364~~ ~~1-365~~ ~~1-366~~ ~~1-367~~ ~~1-368~~ ~~1-369~~ ~~1-370~~ ~~1-371~~ ~~1-372~~ ~~1-373~~ ~~1-374~~ ~~1-375~~ ~~1-376~~ ~~1-377~~ ~~1-378~~ ~~1-379~~ ~~1-380~~ ~~1-381~~ ~~1-~~

65. EXCURSION Spec. St. Mus. No. 2 f. 4-7.

~~Sent~~ by the Rev. E. Davis from Wales. Mr. Dickson,  
Mr. Turner and Mr. Hunter measure as it is common on the  
mountains of Scotland. It has been taken for the Linnean  
Bryon Museum, under a Dilemma's = A.T. f. 96, referred in  
H. Brit. M. as *Leptogium*; but Mr. Earle, who has accu-

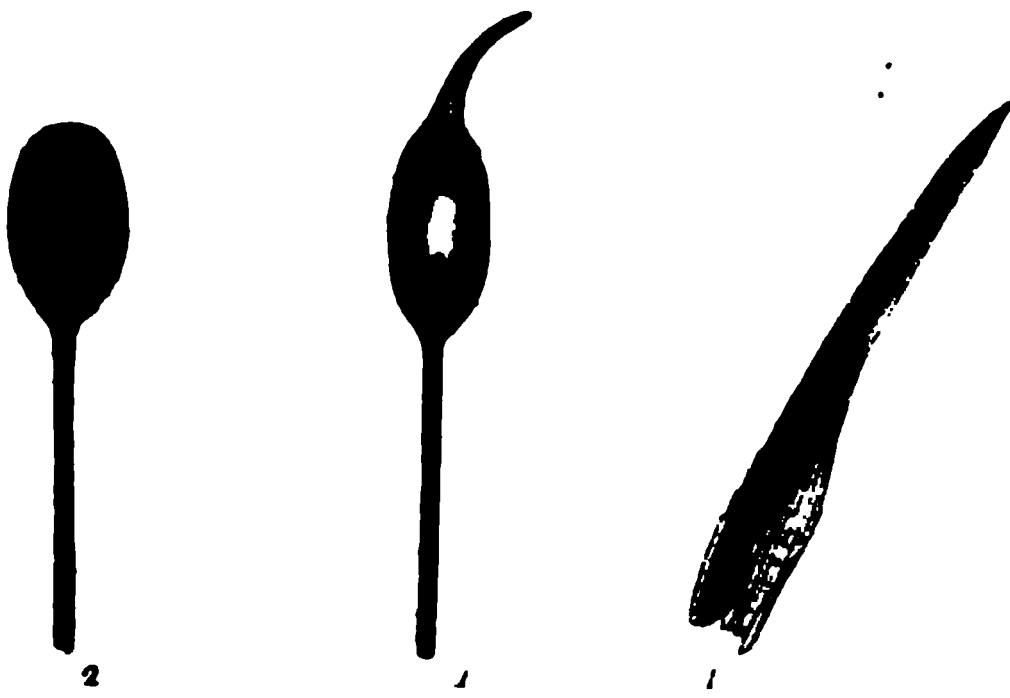


*Andropogon scoparius* L.









*A. ... ..*







[ 2302 ]

**GYMNOSTOMUM stelligerum.**

*Star-topped Beardless-moss.*

---

**CRYPTOGAMIA Musci.**

• **GEN. CHAR.** Caps. without a fringe. Lid deciduous.  
Fei. separating entire from the base.

**SPEC. CHAR.** Stem branched, spreading. Leaves 5-  
near-immixte, spreading; the uppermost stellate.  
Capsule hemispherical. Lid oblique.

**SYN. GYMNOGAMMUM stelligerum. Schrad. Journ. v. 2. 55.**

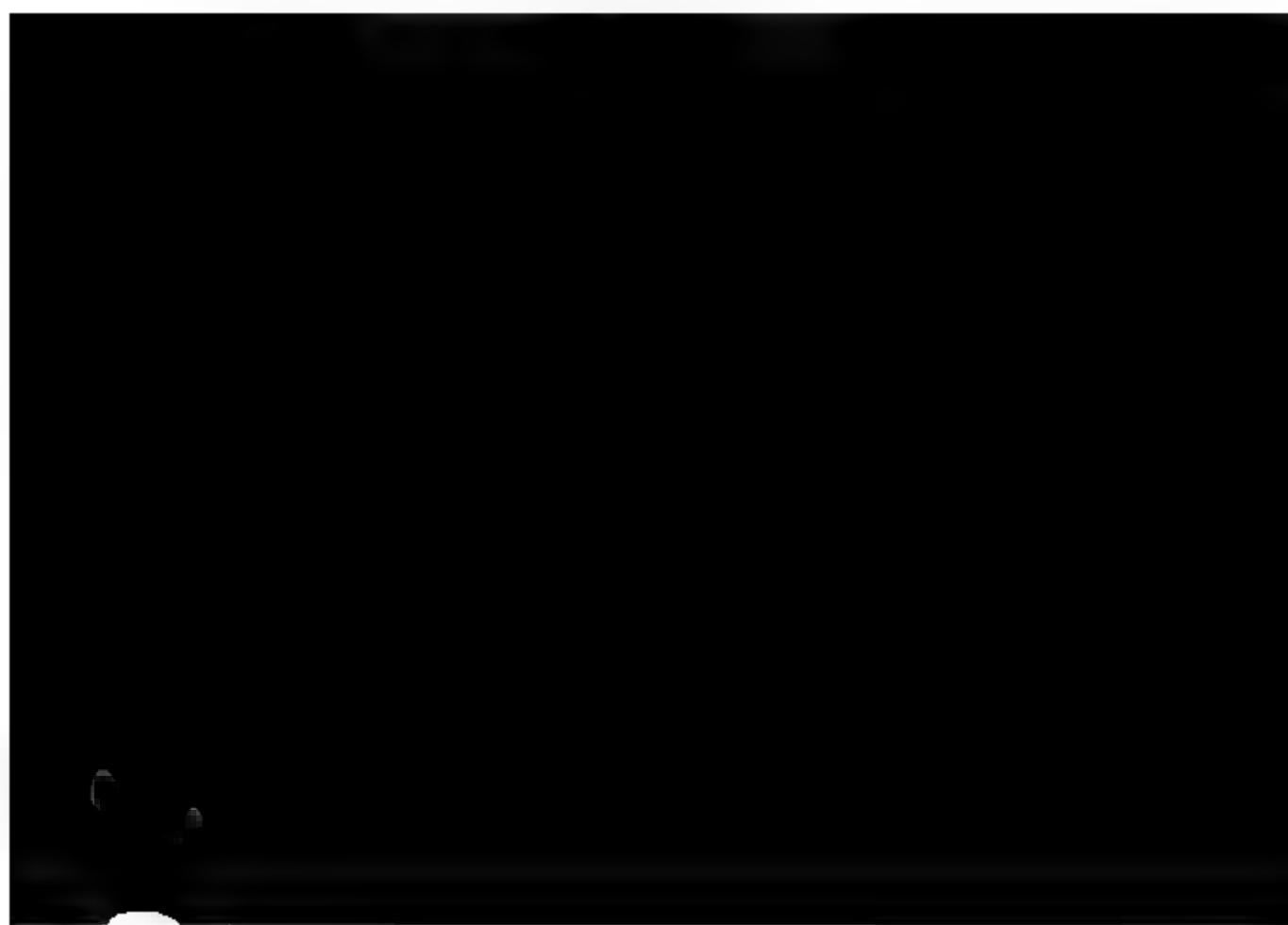
**Brid. Musci. n. 1. 46. Sm. Pl. Brit. 1164.**

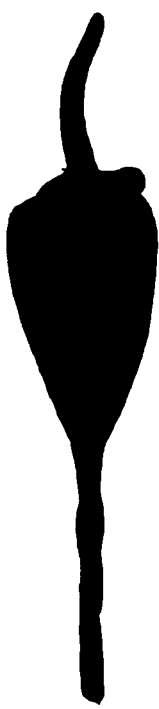
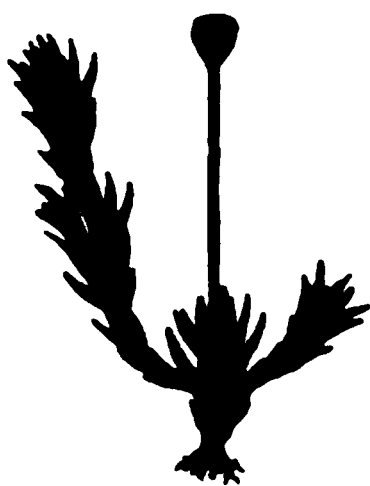
**BRYUM stelligerum. Dick. Crypt. fasc. 2. 3. t. 4.**

**Wick. Moss. Hall. 255.**

---

ALL our knowledge of this little moss is derived from a specimen given by Mr. Dickson, who found it in woods in the





*collected by J. A. S. & J. A. S. & J. A. S.*





[ 2215 ]

**GYMNOSTOMUM microstomum.***Small-mouthed Beardless-moss.*

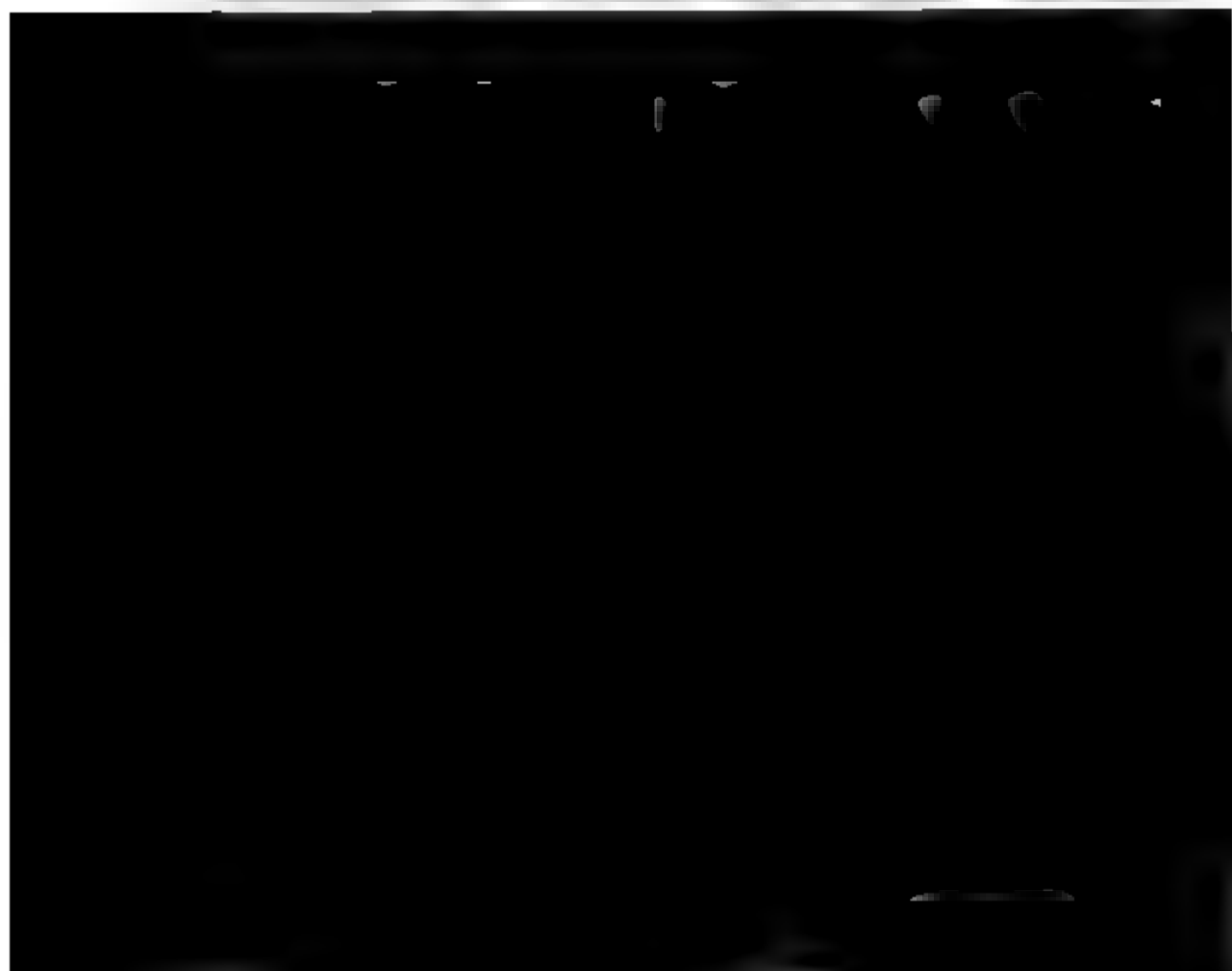
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**CRYPTOGAMIA Musci.****GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Feet* separating entire from the base.**SPEC. CHAR.** Stem nearly simple. Leaves awlshaped,  
incurved by drying. Lid awlshaped. Capsule el-  
lipsical, much contracted at the mouth.**STX.** *Gymnostomum microstomum.* *Hedw. Sp. Musc. 32.*  
*Crypt. i. S. 71. t. 30, B. Sm. Fl. Brit. 1165.*  
*Swartz. Musc. Succ. 21.**Byrrh. microstomum.* *Dicks. Crypt. fasc. 4. 9.*

---

**MR. DICKSON** mentions this curious little moss as growing in *vacuities*. We have compared his native specimens with ours sent by Dr. Swartz, and they precisely agree, as well as with Hedw. & Swartz's figure and description; but we are obliged to take our drawing from some of Swedish growth, a measure we think it our duty to acknowledge, though there is no uncertainty nor ambiguity in the case.

This was supposed to be the smallest of its genus, but it was afterwards found to have some later discoveries. The roots are





*Stachys recta, L.*

[ 9506 ]

## GYMNOSTOMUM paucifolium.

*Few-leaved Beardless-moss.**CRYPTOGAMIA Musci.*

**GEN. CHAR.** Caps. without a fringe. Lid deciduous.  
*Fil.* separating entire from the base.

**SPEC. CHAR.** Stem short and quite simple. Leaves linear-lanceolate, bluntish, beardless, single-ribbed, entire. Capsule slightly ovate.

**STX.** *Bryum paucifolium*. *Dicks. Crypt. fasc. 4. 7. t. 11. f. 3.*

**MR. EAGLE** communicated these specimens to Mr. Turner as the minute *Bryum paucifolium* of Mr. Dickson, found on common rock walls near Wetherby, Yorkshire, and given him by its discoverer, with whose own description, and with the drawing made originally by Mr. Sowerby from his specimens, it precisely agrees: except, that the capsule is not "toothed," but naked at the mouth. This synonym therefore must be erased from *Dicranum cylindricum*. *Fl. Br. 1221*, which, on the authority of Mr. Turner's herbarium, was believed to be Mr. Dickson's plant; and we presume the said *Dicranum* is to be struck out of the British list.

The present moss is very distinct from all the short simple-stemmed kinds of *Gymnostomum* hitherto described. The leaves are linear-lanceolate, somewhat revolute, bluntish, with a strong mid-rib, but no capillary point, and spread moderately in every direction. Frustula terminal, solitary, yellowish. Capsule oblong, slightly ovate, obscurely striated; sometimes contracted just under the orifice. Lid beaked. Veil arched, slender, smooth. The whole plant scarcely exceeds the height of half an inch.

2506



*Jan. 1, 1901, published by J. A. R. R. R. R.*



**GYMNOSTOMUM fasciculare.**

*Blunt Pear-shaped Beardless-moss.*

---

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Stem simple, very short. Leaves ovate,  
acute, minutely serrated. Capsule pear-shaped. Lid  
convex, blunt.

**SYN.** *Gymnostomum fasciculare.* *Sm. Fl. Brit.* 1165.

*Bryum fasciculare.* *Dicks. Crypt. fasc.* 3. 3. t. 7. f. 5.

*With.* 815. *Hull.* 257.

**B. Ægypti.** *Hasselquist's Voyage*, 263.

---

**F**EW mosses have been more celebrated, very few less understood, than this. The herbarium of Linnæus shows it to be what Hasselquist gathered on the walls of Jerusalem, and supposed might be the Hyssop of Solomon "which springeth out of the wall;" an ingenious idea which Linnæus adopted, and others have retailed in various places. Our great master, however, has led us all astray by very inaccurately referring Hasselquist's excellent specimens to his own *Bryum truncatum*. Mr. Dickson, who could not be aware of this, finding the same moss in Britain, described it as new by the name of



**STENOTOMUM fasciculare.**

*Stenotomum fasciculare* Boissier & Heldr.

**STENOTOMUM fasciculare**

**Gen. III.** *Sten.* without a fringe. *Lid* deciduous.

*Lid* separating entire from the base.

**Spec. III.** *Sten.* simple, very short. Leaves ovate,

*Sten.* *Sten.* *Sten.* Capsule pear-shaped. *Lid*

*Sten.* *Sten.*

**Gen. C. stenotomum fasciculare.** *St. Fl. Brit.* 1165.

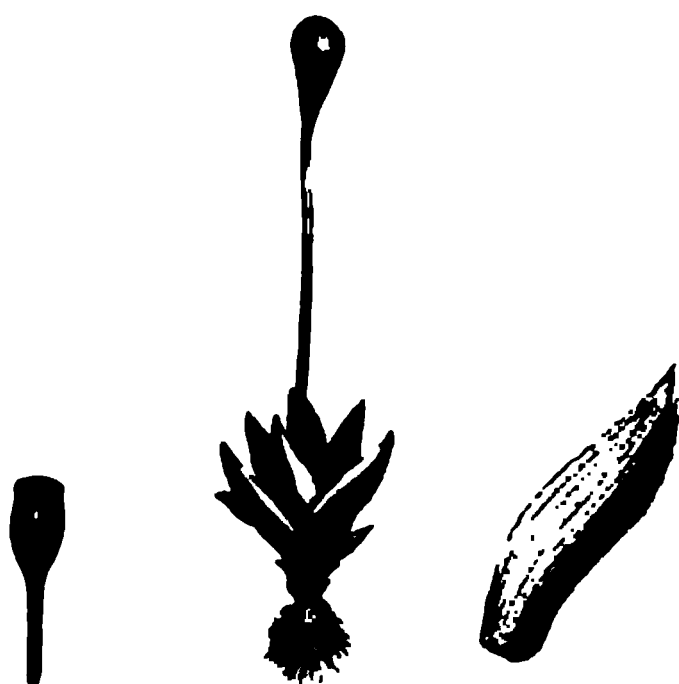
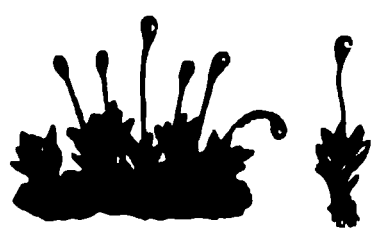
**Sten. fasciculare.** *Leich. Cypre.* *St. Fl. Brit.* 1165.

*St. Fl. Brit.* *St. Fl. Brit.*

**St. Fl. Brit.** *St. Fl. Brit.* *St. Fl. Brit.* 963.

**F**ew names are more common, very few less important than this. The reputation of Linnaeus shows it to be a most important name in the walls of Jerusalem, and supposed to be the source of Sionism - which springeth out of the wall. It is important also which Linnaeus adopted, and which has been used in various places. Our great master, however, has not as yet been very accurately referring to the name - especially specimens in his own *Bryon* translation. Mr. Thwaites, who would not be away of this, finding

1245



*Dec. 1 1803 Published by J. G. Sowerby, London*

## BRYUM pyriforme.

*Pear-shaped Bryum.*

## CRYPTOGAMIA Musci.

GEN. CHAR. Capsule with a lid. Veil smooth. Flower-stalk from a terminal tubercle.

SPEC. CHAR. Stem none. Capsules obovate, erect, without ciliae. Veil awl-shaped. Leaves ovate, spreading, acute, beardless.

SYN. Bryum pyriforme. Linn. Sp. Pl. 1580. Huds. Fl. An. 475. With. Bot. Arr. v. 3. 104. ed. 2. v. 3. 812. Relh. Cant. Suppl. 1. 18. Dicks. H. Sicc. fasc. 4. 22.

Bryum parvum erectis piriformibus majusculis capitulis, foliis Serpilli pellucidis. Raii Syn. 93.

B. serpillifolium pellucidum, capsulis pyriformibus. Dill. Musc. 344. t. 44. f. 6.

Gymnostomum pyriforme. Sibth. Or. 274.

FREQUENT on heaths, ditch-banks, &c. in moist shady places, bringing its capsules to maturity in the spring for the most part, though, as Dillenius remarks, they may be met with occasionally all the year long.

Root annual. Stem none, except that when the plants are produced early in the year, and grow luxuriant, they throw out lateral shoots of leaves a little elevated on short branches, and these flower later than the parent plant. Leaves several, spreading like a star, ovate, entire, acute, but without any terminal hair or bristle; their colour is a pale pellucid green. Stalk central, very short, bearing a large erect capsule, oval when young, and capped with a whitish awl-shaped veil, which Dillenius describes as being angular like that of *B. hygrometricum*, t. 342, but we have found it cylindrical. In ripening the capsule becomes pear-shaped, or thicker towards the top, and the veil splits and falls off. The cover is conical. The orifice destitute of teeth or ciliae, which character makes the genus *Gymnostomum* (naked-mouth) of Hedwig, and it is perhaps one of his best defined ones; but for reasons already given, p. 150, we defer adopting any of them till experience has fixed them.









## GYMNOSTOMUM lapponicum.

*Lapland Beardless-moss.*

## CRYPTOGAMIA Musci.

GEN. CHAR. Caps. without a fringe. Lid deciduous.  
Veil separating entire from the base.

SPEC. CHAR. Stem branched. Leaves linear-lanceolate, channelled, curled when dry. Capsule abrupt, furrowed.

SYN. *Gymnostomum lapponicum*. Hedw. *Crypt.* 1. 3. 10. t. 5, A. Sm. *Fl. Brit.* 1167. Swartz. *Musc. Succ.* 20.

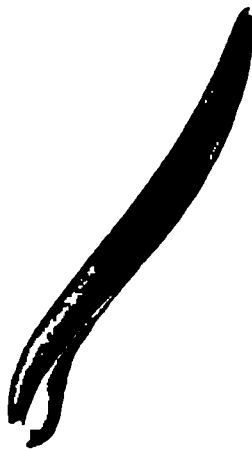
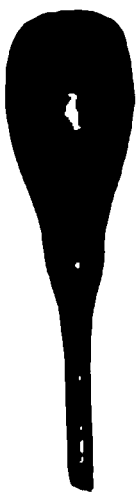
*Anictangium lapponicum*. Hedw. *Sp. Musc.* 40.

*Bryum lapponicum*. Dicks. *Crypt. fasc.* 4. 10.

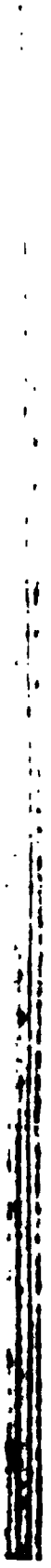
AS we approach so near to the end of our long labours, we think it best to finish all the species of a genus together, if possible. This then, with the three preceding plates, concludes the British species of *Gymnostomum*, as far as they are described. It was discovered on the alpine rocks of Scotland by Mr. Dickson. Our specimen accompanied by a dark *Jungermannia* was gathered in Cwm Idwell, North Wales, by Mr. Griffith. The other, given us by Dr. Swartz, came from Lapland. Professor Thunberg sent a similar one to Hedwig, destitute, like ours, of a lid to the capsules, nor are we informed of the season for gathering the plant in perfection.

The stems compose loose perennial tufts, about an inch high, and are for the most part very much branched, leafy throughout, and spreading. Leaves of a full green, imbricated, linear-lanceolate, acute, beardless, keeled, single-ribbed, entire; when dry incurved and crisped. Fruit-stalks terminal, solitary, short, erect. Capsule erect, somewhat pear-shaped, with a wide mouth, its sides marked with eight longitudinal furrows and as many strong ribs. The colour of the fruit is a bright bay. We find nothing of the tulip-like red and yellow exhibited in Hedwig's plate; so difficult is it to command exactness in subordinate colourers!

2216.



... ..



10



**GYMNOSTOMUM imberbe.**

*Branched Green Beardless-moss.*

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*CRYPTOGAMIA Musci.*

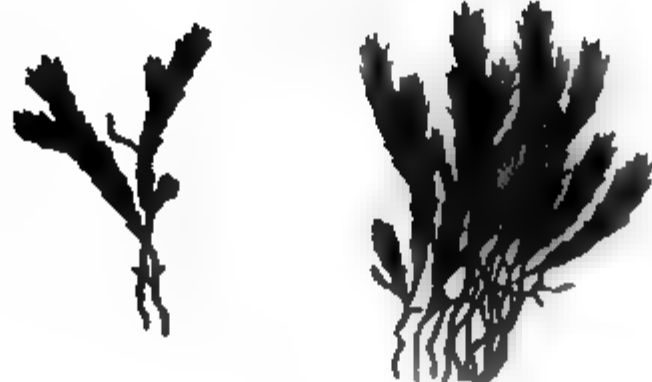
**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Stem much branched, spreading. Leaves  
ovate, without rib or nerve; green at the point.  
Capsule bell-shaped, nearly sessile.

---

**DISCOVERED** on dry rocks upon mountains in the west of Ireland by Miss Hutchins, who in 1809 sent specimens to Mr. Turner, which he has kindly communicated to us.

This moss comes nearest to *G. ciliatum*, t. 1179, from which it differs in wanting the essential character of that species, the white transparent point of its leaves, even of the upper and longer ones which overtop the fruit. There is also a more membranous habit in all the leaves, and their margins are always somewhat revolute. The old ones are very black.



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[ 1179 ]

## GYMNOSTOMUM ciliatum.

*Branched Hoary Beardless-moss.*

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CRYPTOGAMIA Musci.

**GEN. CHAR.** *Caps.* without a fringe. *Lid* deciduous.  
*Veil* separating entire from the base.

**SPEC. CHAR.** Stem much branched, spreading. Leaves  
ovate, without rib or nerve, pellucid at the point.  
Capsule bell shaped, nearly sessile.

**SYN.** *Gymnostomum ciliatum.* Swartz. *Musc. Suec.* 19.  
*Roth. Germ.* v. 3. 129.

*Hedwigia ciliata.* Hedw. *Crypt.* v. 1. 107. t. 40.

*Bryum apocarpum*  $\beta$ . *Linn. Sp. Pl.* 1579. *Huds.* 474.  
*Wub.* 809.

*Fontinalis albicans.* *Hull.* 275.


*Phascum piliferum.* *Wub.* 786!

*Sphagnum nodosum, hirsutum et incanum.* *Dill.*  
*Musc.* 246. t. 32. f. 5.

*S. cauliferum et ramosum saxatile hirsutum incanum,*  
*capitulis virentibus.* *Raii Syn.* 105.

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**N**OTHING can more plainly shew the necessity of attending to the Hedwigan characters of mosses than the mistake of former botanists in confounding this with *Gymnastrum* etc.





*... ..* collected by J. A. Sowerby, London.





**SPLACHNUM** *nnioides*.  
Green Tapering Gland-moss.

**CRYPTOGAMIA** *Musci*.

**GEN. CHAR.** Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

**SP. CHAR.** Receptacle obconical, green. Leaves elliptic-lanceolate, bearded, entire.

**SYN.** *Splachnum nnioides*. *Linn. Fil. Meth. Musc.* 26.  
*Sw. Fl. Brit.* 1169. *Heix. Sp. Musc.* 51. *Crypt.*  
*z. SS.* 1. 11. *Dicks. Crypt. fasc.* 1. 2. *Wilh.* 793.  
*Hill.* 246.

In the first volume of this work, 1. 796, a *Splachnum* is figured as the genus of *nnioides*, which has since been distinguished from that species, and is the fastigiatum of the *Flora Danica*, which name is therefore to be applied to all the plants of the subgenus, except to *Dicks.* 1. 44 f. 3, which is certainly right, changed for those indicated in *Fl. Brit.* 1169. It is now to be observed that the receptacle of the *nnioides* ought to be of a deep red rather than green.

The first specimen sent to me was received from Mr. Deane, and agrees with the original *Linnæan* specimen. It differs from the above in that it is a somewhat withered plant, and the leaves are not so green as the others, and the capsule is not so large. It is found in the common mossy ground near the Newland and Water, growing in the edge of moss and heath, according to Mr. Deane. The capsule is bristled, about as much high as broad, and is green, with a little withered. It is not so large as the others, green when fresh, not at all so when it is dry, and it is long, as the receptacle, about as much high as broad, and is greenish.



*April 2. 1844. Published by J. J. Sowerby, London*

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2. **THE**





**SPLACHNUM angustatum.**

*Narrow-leaved Splachnum.*

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**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Caps.* cylindrical, placed on a fleshy receptacle. *Fringe* simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle obovate, brownish. Leaves lanceolate, pointed, bearded; the upper ones serrated.

**SYN.** *Splachnum angustatum.* *Linn. fl. Meth. Musc.* 33. *Hedw. Sp. Musc.* 51. *Crypt. v.* 2. 37. *t.* 12. *Dicks. Crypt. fasc.* 2. 3. *Wib.* 792. *Hull.* 246.

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**W**E believe the species of *Splachnum* generally grow on the dung of animals, and for the most part in mountainous situations. Mr. G. Donn gathered the present kind upon cow-dung on the side of Lochawen, Scotland, growing with *S. sphaericum*, see *vol.* 11. *t.* 785.

It was originally described by Dr. Swartz in his Dissertation upon Mosses, published under the presidency of the younger Linnæus, and was first announced as a British plant by Mr. Dickson.

The stems form very dense tufts, and are from one to two









## SPLACHNUM urceolatum.

*Elliptical Gland-moss.**CRYPTOGAMIA Musci.*

**GEN. CHAR.** Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle obovate, greenish-brown. Leaves elliptical, concave, entire, taper-pointed.

**SYN.** *Splachnum urceolatum.* Hedw. Sp. Musc. 52.  
Cryp. : 2. 39. t. 13 Sm. Fl. Brit. 1170. Dick.  
Cryp. fasc. 2. 2. With. 793. Hull. 246.

*S. ampullaceum.* Fl. Dan. t. 192; bad.

*S. beyoude.* Zoeg. Fl. Island. 12. Von Troil Id. 119.

**FOUND** on the Scottish mountain of Ben High, by Mr. Dickson, to whom we are indebted for a specimen, which we have compared with original ones in the Linnæan herbarium, gathered by Zoega in Iceland.

The stems compose dense tufts, about an inch high, and are either simple or divided. Leaves numerous, imbricated, darkish green, elliptical, obtuse, concave, entire, with one rib, and a long, taper, very slender green point, along which the rib is continued, but there is no positive hair-like appendage. Fruitstalk various in length, stout, red or tawny, quite straight. Receptacle obovate, tolerably smooth, at first green, then brown. Capsule brown, narrower than the receptacle, and but about half as long, finally contracted in the middle. Lid hemispherical. Fringe yellowish, turning brown in decay.

2417



*These were collected by Dr. H. H. Henshaw*







SPLACHNUM tenue.

*Slender Splachnum.*

CRYPTOGAMIA Musci.

GEN. CHAR. Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

SPEC. CHAR. Receptacle obconical, slender, brown. Leaves ovate, acute, serrated, beardless.

SYN. Splachnum tenue. Dickf. Crypt. fasc. 2. 2. Willd. 793. Hull. 246.

S. purpureum. Willd. 794. t. 18. f. 9. Hull. 246.

GATHERED in October on the very lofty mountains of ~~Everest~~ <sup>by Mr. G. Donn.</sup> It has also been found by the same intelligent and excellent observer, as well as by Mr. Nelson upon Ben Lawers; and by Mr. Griffith in North Wales. ~~Its~~ <sup>Its</sup> original discoverer was Dr. F. Buchanan, who gathered it at its paternal seat at Leney near Stirling, in 1792. No foreign writer seems to have known this species, but Mr. D. Turner is possessed of specimens lately gathered at the Harz by Mr. Murr. Can it be *S. serratum* of Hedw. Sp. Musc. 53. t. 5.



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**SPLACHNUM mnioides.**

*Brown tapering Splachnum.*

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**CRYPTOGAMIA Musci.**

**GEN. CHAR.** *Capsule* cylindrical, placed on a fleshy  
*receptacle.* *Fringe* of a simple row of teeth.

**SPEC. CHAR.** Receptacle oblong, brown. Leaves  
elliptic-lanceolate, entire, bristle-pointed.

**SYN.** *Splachnum mnioides.* Swartz, in *Linn. fil. Meth.*  
*Musc.* 26. *Dicks. Crypt. fasc.* 1. 3. *With.* 793.  
*Hull.* 246.

*Bryum ampullaceum*, foliis et ampullis angustiori-  
bus. *Dill. Musc.* 345. t. 44. f. 5.

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**SPECIMENS** of this moss were communicated to us from  
the mountains of Scotland by Mr. John Mackay in the month  
of July. It grows in dense tufts, consisting of longish, simple  
or divided, leafy stems. The leaves are closely imbricated,  
lanceolate, approaching to an elliptical form (especially the  
lower ones), entire, tipped with a long bristly point, and having











[ 1590 ]

SPLACHNUM ovatum.

Ovate Gland-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. Caps. cylindrical, placed on a fleshy  
receptacle. Fringe simple, of 16 teeth, standing  
in pairs.

SPEC. CHAR. Receptacle ovate, brownish. Leaves  
ovate, acute, entire.

SYN. ~~Splachnum~~ ovatum. Dick. Crypt. fasc. 2. 2.  
Sed. Fl. Brit. 1172. Hedw. Sp. Musc. 54. t. 8.  
f. 4—6. Willd. 793. Hall. 246. Turn. Musc.  
Esp. 15.

~~Placium pedunculatum.~~ Hedw. ed. 1. 397.

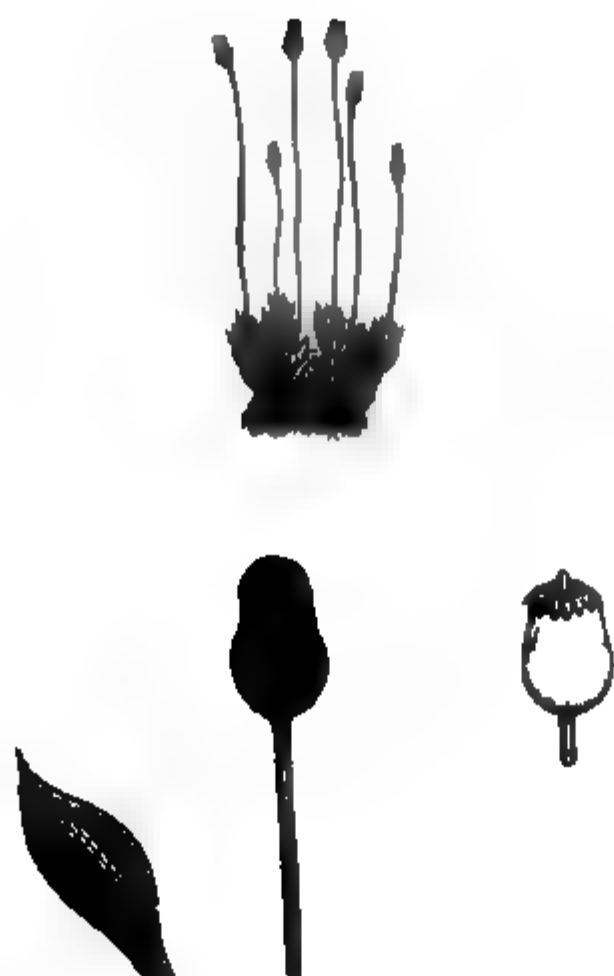
~~Dryum impellacum,~~ foliis serpylli pellucidis, collo  
citrato. Dill. Musc. 344. t. 44. f. 4.

~~B. erios giganteis capitulis,~~ foliis serpylli pellucidis,  
obtusis. Dill. in Ram. Sp. 93. t. 3. f. 2.

THREE specimens were gathered by Dr. Francis Buchanan at Llangollen, a Llangollen near Stirling, his native place. The glen of Llangollen has recently been celebrated in the beautiful poetry of Mr. Walter Scott, and from these romantic and sequestered scenes, a long resident in various parts of India has neither perceived the lack, nor warmed the heart, of our friend.

~~Splachnum ovatum~~ grows on alpine spongy bogs in Scotland, Wales, Ireland, and the north of England. The capsules are perfected in June or July. Roots annual. Stem short and simple. Leaves of a linear ovate figure, rather obtuse, with a small point, entire, even, furnished with one strong rib. Fruit-stalk shorter or not long, straight, rigid, unwoy, joint upwards. Receptacle erect or somewhat globular, at first green, but soon becoming brown, smooth, not wrinkled. Capsule contracted, much shorter and narrower than the receptacle, unwoy. Fringe at length reflexed. Lid conical.

1596



*April 1866 Published by J. L. Smith, London.*

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**SPLACHNUM** rugosum.

*Rugged Gland-moss.*

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**CRYPTOGAMIA** *Muci.*

**GEN. CHAR.** *Caps.* cylindrical, placed on a fleshy receptacle. *Fringe* simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle globose, at length wrinkled, brown. Leaves broad-ovate, acute, entire.

**SYN.** *Splachnum rugosum.* *Dicks. Crypt. fasc. 4. 3. t. 10. f. 7.* *Sm. Fl. Brit. 1173.*

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**COMMUNICATED** in 1803, by Mr. G. Don, from the Highlands of Scotland, where Mr. Dickson first found it.

Roots annual, black, elongated, forming dense tufts. Stems nearly all simple; the sterile ones short, bearing several crowded, spreading leaves of a dark green, strongly reticulated, entire, broad-ovate, contracted at each end, and acute



*Not published by Society for the*







## SPLACHNUM sphaericum.

*Green globular Splachnum.*

## CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* cylindrical, placed on a fleshy  
*receptacle*. *Fringe* of a simple row of teeth.

SPEC. CHAR. *Receptacle* nearly globular, green.  
*Leaves* ovate, pointed, entire.

SYN. *Splachnum sphaericum*. Swartz. in Linn. fil.  
*Metb. Musc.* 33. t. 1. f. 1. *Dicks. Crypt. fasc.* 1. 3.  
*Wub.* 791. *Hull.* 245.

AMID all the doubts and difficulties that modern botanists have met with in fixing the genera of mosses, the *Splachnum* remains unshaken. Its essential character depends on the succulent receptacle, always thicker and more turgid than the cylindrical capsule which it sustains. The male flowers form a little terminal star on a separate root from the female.

This rare species was first observed in Britain by my worthy friend and fellow-student Dr. Francis Buchannan, now resident

708.







[ 1921 ]

**SPLACHNUM gracile.***Zigzag Gland-moss.***CRYPTOGAMIA Musci.**

**GEN. CHAR.** Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle globose, rusty-brown. Leaves ovate, with a serrated point. Fruit-stalk zigzag.

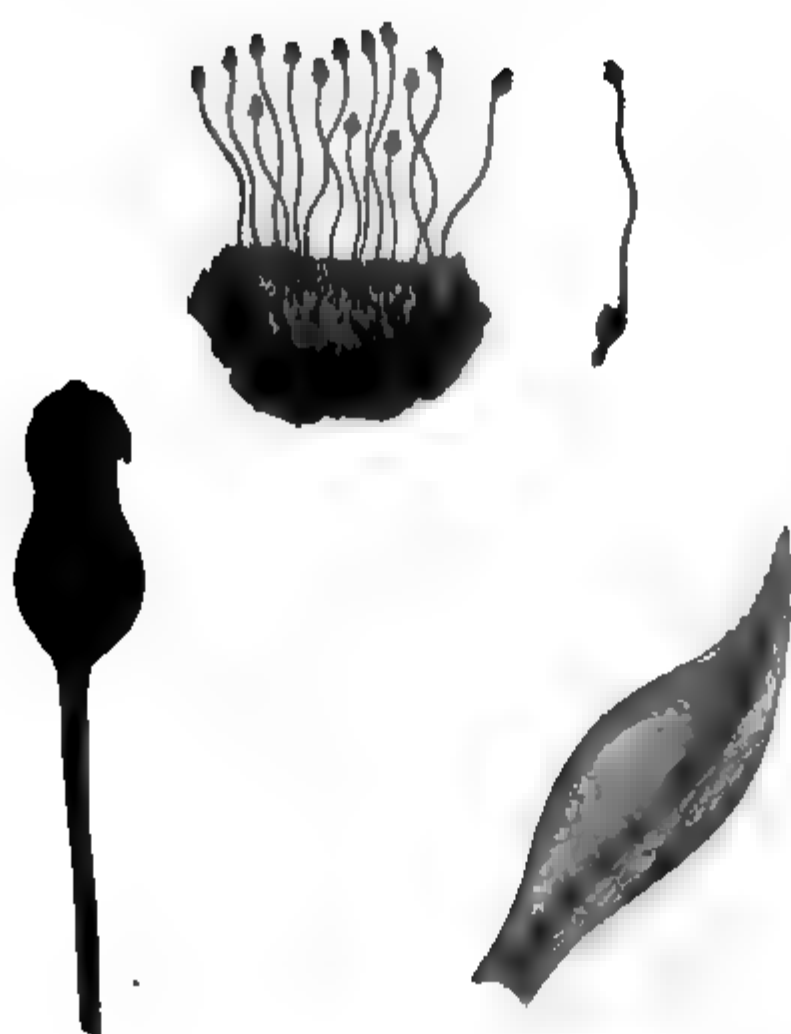
**SYN.** *Splachnum gracile*. *Dicks. Crypt. fasc. 4. 3. t. 10. f. 5.* *Sm. Fl. Brit. 1174.*

*S. sphaerium* E. *Turn. Musc. Hib. 15.*

*S. vasculosum*. *Huds. 469. Lightf. 697. With. 791,*  
with wrong synonyms and descriptions. *Hull. 245.*

**BOUGHT** from Ben Lavers in the Highlands by Mr. Turner and Mr. W. J. Hooker. We think, with Mr. Dickson, that it is a very distinct species. Before the species of *Splachnum* was first described, it was taken for the

1971



*Fig. 1. Bot. Institute of the Academy of Sciences*

✓







SECRET

**THE END**

THEY WERE TAKEN IN THE COURSE OF A LARGE  
CIVILIAN INVESTIGATION OF THE DECISIONS  
MADE BY THE COMMISSION IN A FORMER CASE.

~~Succinea~~ ~~lenticularis~~ ~~lenticularis~~. Leaves  
~~succinea~~

Ms. ~~Smithsonian Institution~~ Smithsonian Institution Jan. 3, P. 1892

Mr. E. A. Tamm

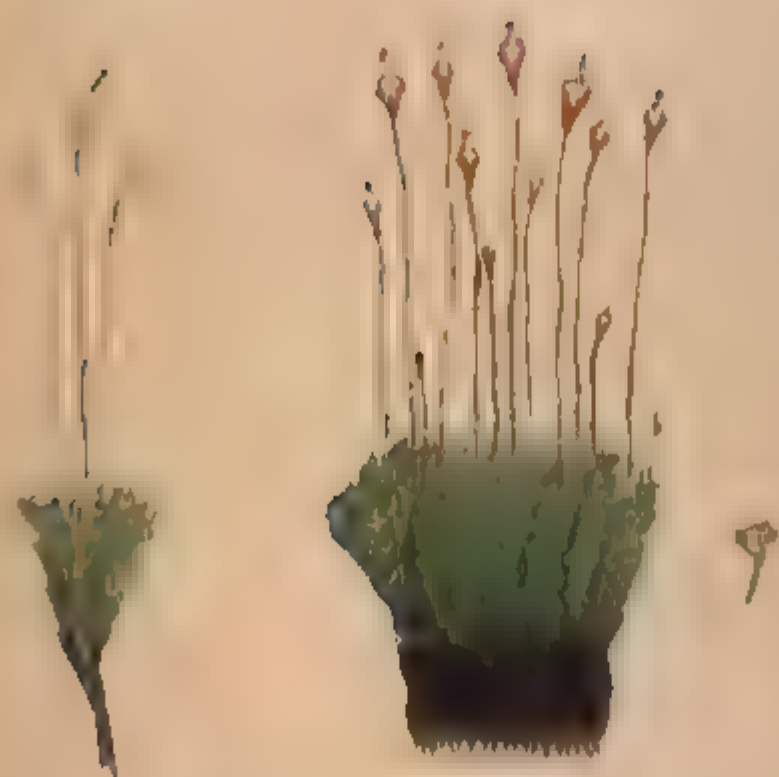
52 53 54

~~It was found that the following items were not~~  
~~present in the file.~~

I am, Sir, very respectfully,  
Your obedient servant,  
J. M. Smith

[illegible]

SECRET



3. The following information is being provided for your information:

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[ 1116 ]

## SPLACHNUM Turnerianum.

*Turnerian Splachnum.**CRYPTOGAMIA Mss.*

GEN. CHAR. Capsule cylindrical, placed on a fleshy  
~~receptacle~~. Fringe of a simple row of teeth, ap-  
 proaching each other in pairs.

SPERM. CHAR. Receptacle obovate, green. Capsule  
 rounded at the base, standing on a short stalk.  
 Leaves imbricate, taper-pointed, somewhat ser-  
 rated.

SPERM. Siliqua Turnerianum. *Dicks. Crypt. fasc.*  
 4. p. 2. tab. f. 11.

*S. imbricatum*. *Wat.* 791. t. 18. f. 2, left hand  
 figure.

A NATIVE of mountainous heaths and moors, found by  
 Mr. Griffith in North Wales, and by Mr. Turner and Mr.  
 Sowerby in a bog on a high hill 3 miles from Exeter towards

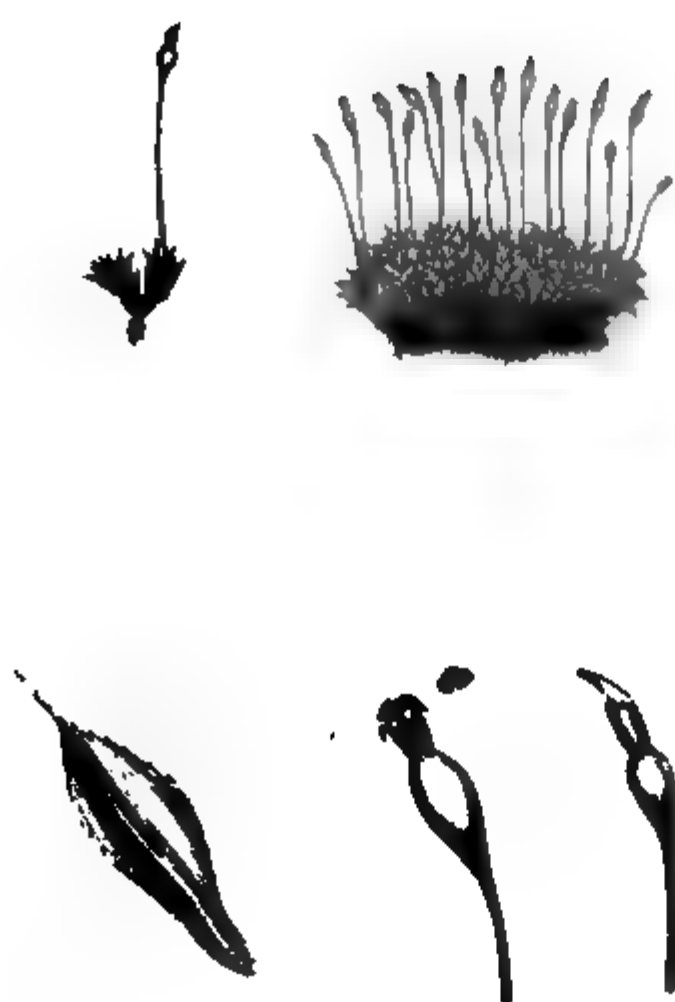


Fig. 1. *Andropogon scoparius* L.



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**SPLACHNUM** *lingulatum*.*Tongue-leaved Gland-moss.**CRYPTOGAMIA Muci.*

**GEN. CHAR.** *Caps.* cylindrical, placed on a fleshy receptacle. *Fringe* simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle inversely conical, brown, narrower than the capsule. Leaves tongue-shaped, obtuse, entire, pointless.

**SYN.** *Splachnum lingulatum*. *Dicks. Crypt. fasc. 4. 4. t. 10. f. 6.* *Sm. Fl. Brit. 1177.*

**SENT** from the Highland mountain of Ben Lawers by Mr. G. Don. We have also been favoured with a specimen by Mr. Dickson, its original finder and describer.

This species forms tufts, supposed to be annual like the rest of its genus. Roots black, dense. Stems simple or divided, not an inch high. Leaves of a fine pellucid green, with strong oblong reticulations, tongue-shaped, rather concave, obtuse, entire, single-ribbed, without any terminal hair or point; the lower ones rather more acute. Fruitstalks solitary, terminal, above an inch high, of a fine deep crimson when fresh, not quite straight. Receptacle so small and narrow as to seem merely the elongated base of the capsule, which is of the same brown or chestnut hue, oblong, with a wulsh mouth. Fringe short, inflexed, brown.

2095



*St. aspleneae* + *Phacelodes*

THE UNIVERSITY OF CHICAGO

.



**SPLACHNUM reticulatum.**

*Reticulated Gland-moss.*

**CRYPTOGAMIA Mori.**

**GEN. CHAR.** Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

**SPEC. CHAR.** Receptacle inversely conical, brown, narrower than the capsule. Leaves ovate, acute, beardless, serrated towards the point.

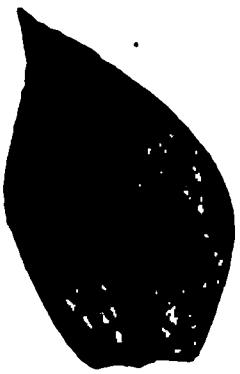
**SYN.** *Splachnum reticulatum.* Sm. *Fl. Brit.* 1177.  
*Boydii reticulatum.* Dickl. *Crypt. fasc.* 2. 4. t. 4.  
f. 6. *Will.* 821. *Hall.* 255.

**MR. DICKSON** found this *Splachnum* on the Scottish mountain of Ben Hagh. No other person has met with the same, and his original specimens were in an advanced and damaged condition. One of these only, from Mr. Turner's herbarium, could we procure: to which we annex a magnified capsule from Mr. Dickson's plate.

The broad ovate leaves, which are strongly reticulated, distinguish the species from *longistylum*, t. 2095, with which the smallness of the receptacle nearly agrees. The latter, with the swelling capsule, both together form a pear-like figure. The fringe is inflexed. Frutestalk from the bottom of the stem or branch.

*S. Pseudichneumon*, Hedw. *Crypt.* v. 3. 99. t. 40, differs in having more spatulate and blunt leaves, with a terminal frutestalk, and we can scarcely suppose it the same with our plant, though Dr. Neeser unites them. His synonym therefore, cited with doubt in the *Fl. Brit.*, should be excluded from thence, as belonging to the plant of Hedberg.

2507.



*Revised published by J. S. Sargent & Co.*







[ 1277 ]

**ANDREA rupestris.****Dusky Rock Andrea.****CETPUGOLA Moench.**

**CAUL. LEAF.** *Caul.* very short. *Fringe* simple, of 4  
*anther-like* *teeth* *ending* at their tips, and bearing  
 the *stamens*.

**STEM. LEAF.** *Leaves* imbricate, hooked, sickle-shaped,  
*ending* the *stem*.

**TYPE.** *Andrena rupestris*. *Nat. Fl. Brit.* 1178.

*Andrena* *rupestris*. *Linna. Sp. Pl.* 1601. *Holt.*

*Fl. v. Brit. Mus.* 882. *Holt.* 281. *Lightf.* 787.

*Nat. Fl. Brit. Mus.* 7. 23.

*Andrena* *rupestris* *Andrena* *rupestris*, *folia* *capillaris* *ro-*  
*stris*. *Jul. Mus.* 37. 2. 73. f. 40.

**THE** *Mr. Thunberg* of *Hamburg*, one of the most indus-  
 trious and correct botanists, and an ardent pupil of *Linnaeus*,  
 first separated this genus from *Andrena*, and removed it,  
 with *Andrena* *rupestris*, to the true moths. He was  
 one of the first who understood the real genera of this tribe;

1277



Feb 2 1804. Published by J. Sowerby, London.





[ 2162 ]

## ANDRÆA Rothii.

*Black Mountain Andræa.*

## CRYPTOGAMIA Musci.

GEN. CHAR. Caps. oblong, of four valves, whose points adhere to the lid. ~~Stigma~~ none.

SPEC. CHAR. Leaves ~~lanceolate~~, keeled, sickle-shaped, with a midrib, leaning one way. Sheath-scales without a rib.

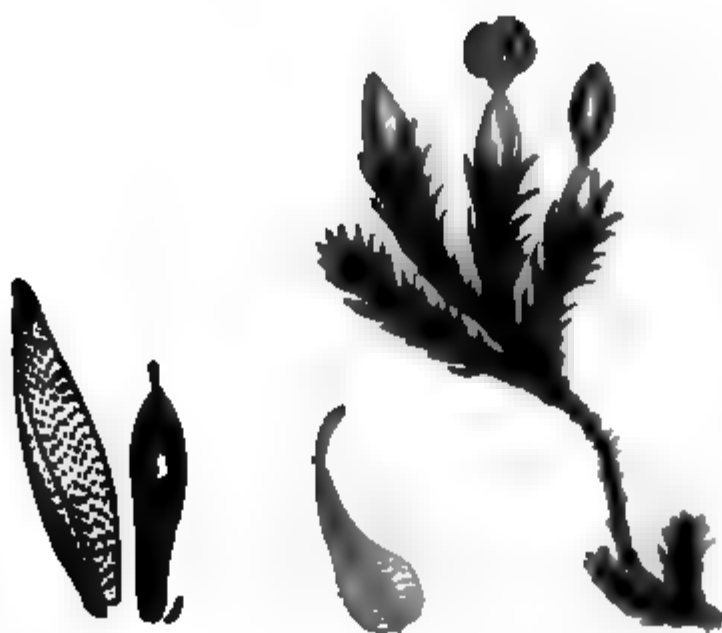
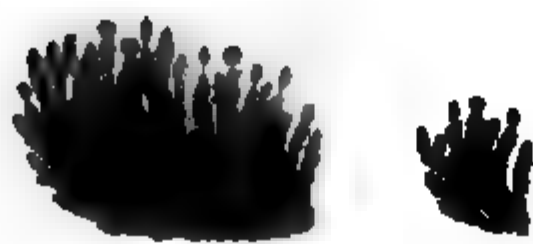
SYN. *Andræa Rothii*. Mohr. *Crypt. Germ.* 385. t. 11. f. 7—9. *Hooker's Mus.*

*A. rupestris*. Sm. *Fl. Brit.* 1178. *Turn. Mus. Hit.* 14.

*Lichenastrum alpinum nigricans*, foliis capillaceis reflexis. *Dill. Musc.* 307. t. 73. f. 40.

OUR friend Mr. W. Hooker has enabled us to correct an error into which we had fallen concerning *A. rupestris*, t. 1277,





*June 1, 1880 published by J. H. Countryman, London.*







[ 1278 ]

**ANDREA alpina.**  
*Cascade Alpine Andrea.*

**CRYPTOGAMIA Musci.**

**Gen. Char.** *Caul.* very short. *Fringe* simple, of 4  
 imbricated teeth, cohering at their tips, and bearing  
 the *fil.* and *per.*

**Spec. Char.** Leaves ovate, concave, imbricated every  
*per.*

**Spec.** *Andrea alpina.* Sm. *Fl. Brit.* 1179.

*Andrea alpina.* Hedw. *Sp. Musc.* 49.

*A. stricta.* Hedw. *Sp. Musc.* 47. l. 7. f. 2?

*A. nemoralis.* Eick. *Crypt.* 61. *Beitr.* 1. 1. 180.  
*and* *per.*

*Longeternia alpina.* Linn. *Sv. Pl.* 1601. *Huds.* 517.

*W. et A. 882.* *Hedw.* 251. *Lichtf.* 757. *Dicks. H.*

*Spec. Musc.* 5. 98.

*Lichetia alpina* *acrocarpus* *terres*, *calycibus*  
*quadratis.* *Dicks. Musc.* 306. l. 73. f. 39.

**THIS** is found like the last in the crevices of Alpine rocks.  
 It agrees with that in size and habit, but is more invariably of  
 a very dark brown colour approaching to black. It is also  
 sometimes found in the same places, but









[ 2334 ]

ANDRÆA nivalis.

*Tall Slender Andraea.*

---

*CRYPTOGAMIA Musci.*

**GEN. CHAR.** Caps. oblong, of four valves, whose joints adhere to the lid. Fringe none.

**SPERM. CHAR.** Stem branched. Leaves loosely imbricated, lanceolate, single-ribbed, curved toward one side. Sheath-scales similar to the leaves.

**SEX.** *Andraea nivalis.* *Hooker Tr. of Linn. Soc.* t. 10. 213. t. 10. f. 4.

---

**COMMUNICATED** by Mr. W. Borrer, who with Mr. Hooker discovered this new *Andraea* upon rocks on the summit of *Ben Nevis*, at *Nevis*, at the east end. It is perennial, producing fruit in the summer.

The present species greatly exceeds all previously known in its height, which is three inches, or more. The stems form









[ 1025 ]

**TETRAPHIS pellucida.**

*Four-toothed Moss.*

*CRYPTOGAMIA Musci.*

**GEN. CHAR.** Capsule oblong. Fringe simple, of 4 pyramidal, upright, separate teeth.

**SPEC. CHAR.** . . . . .

**SYN.** *Tetraphis pellucida.* Hedw. *Sp. Musc.* 45. t. 7. f. 1. Swartz. *Musc. Suec.* 21. *Sibtb.* 275.

*Mnium pellucidum.* Linn. *Sp. Pl.* 1574. *Huds.* 472. *Witt.* 799. *Hull.* 249. *Relb.* 398.

*M. serpilli foliis tenuibus pellucidis.* Dill. *Musc.* 232. t. 31. f. 2.

*M. minus non ramosum, angustioribus et pellucidis foliis.* Dill. in *Raii Syn.* 78.

*Bryum pellucidum.* Abbot. 237.

**A NATIVE** of wet shady places at the roots of trees, for specimens of which we are obliged to Mr. Abbot. It flowers early in the spring, ripening its capsules in April or May.

Leaves annual, tufted, frayed with black or brown matted hairs. Stems simple, erect, clothed with alternate, sessile, ovate or lanceolate, entire, pellucid, single-ribbed, beardless leaves, various in breadth, the uppermost being somewhat gradually







[ 1832 ]

**BRYUMIA Browniana.**  
**Bryumia Grinnia.**

**BRITISH MUSE.**

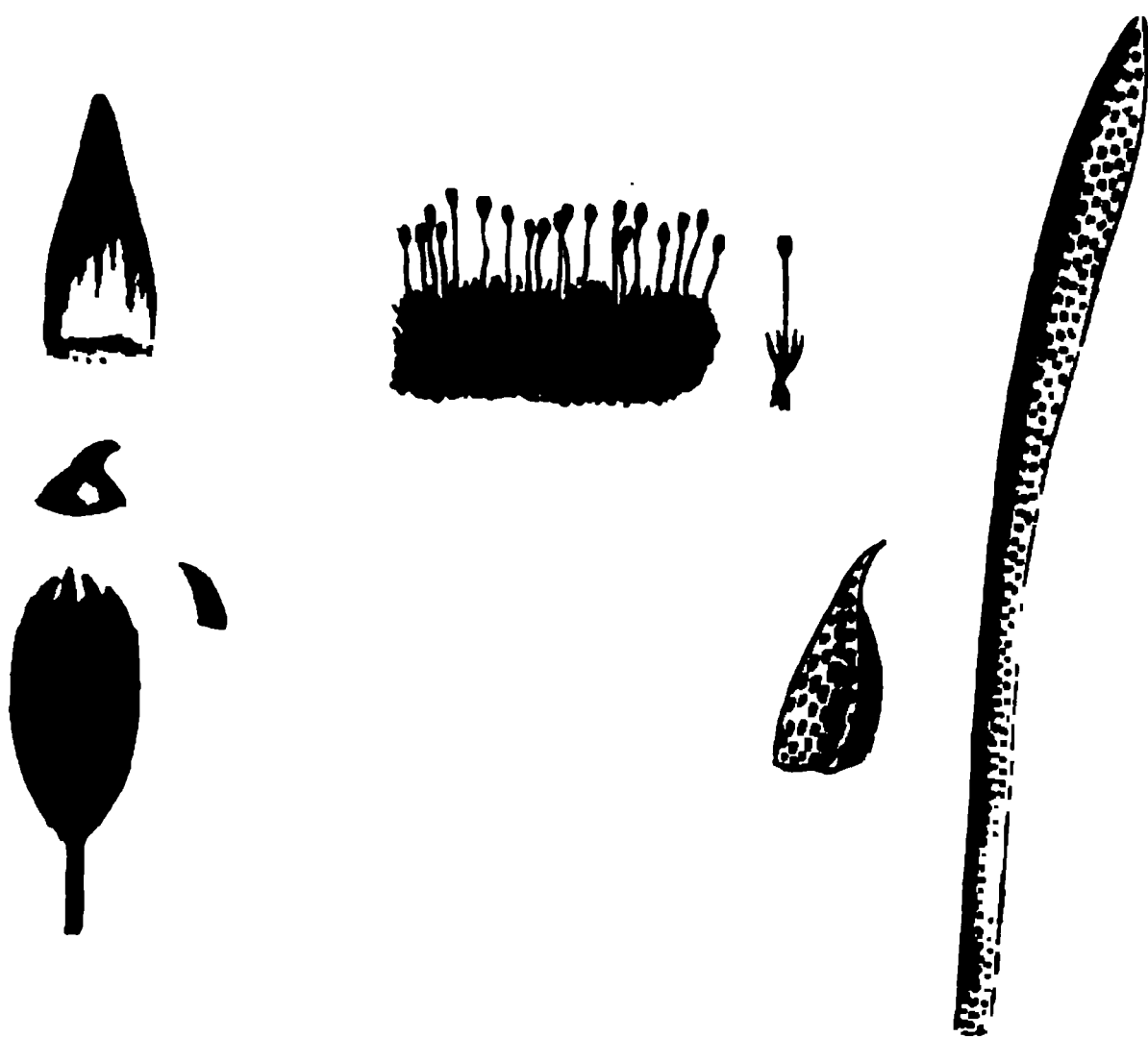
**Gen. Char.** *Fronds* simple, of 16 teeth, broadest at  
their base. *Stems* terminal. *Feil* cylindrical.

**Spec. Char.** *Radical* leaves linear, flat; floral ones  
more concave, all jointed. Capsule elliptical, erect,  
sessile. *Stem* none.

**Syn.** *Bryum Brownianum*. *Dicks. Crypt. fasc. 4. 7.*  
*in 1832.*

**Ordinationum Browniana.** *See F. Brit. 1869.*

**Feil.** It is not to be expected every error of which I am  
conscious. I was the subject of opportunity afforded me by  
numerous perfect specimens of the moss, gathered by Mr.  
W. Brown in some of the rocks at Lord Grantley's lakes  
near Bland. It was not until I had been informed to Grinnia, to



*Feb. 1 1863. Published by J. C. Senary, Louisa*







**B R Y U M** *extinctorium.*  
*Extinguisher Bryum.*

---

**CRYPTOGAMIA** *Musci.*

**GEN. CHAR.** *Caps.* with a lid. *Veil* smooth. *Fruit-stalk* from a terminal tubercle.

**SPEC. CHAR.** Capsule cylindrical, entirely covered by the bell-shaped beaked veil. Leaves lanceolate, with a strong rib, entire.

**Syn.** *Bryum extinctorium.* *Linn. Sp. Pl.* 1581.  
*Huds.* 475. *With.* 816. *Retz.* 402. *Dicks.*  
*H. Sicc. fasc.* S. 18. *Abbot* 239.

*B. erectis capitulis, calyptrâ laxâ conicâ, foliis Serpilli pellucidis angustioribus.* *Raii Syn.* 92.

*B. calyptrâ extinctorii figurâ minus.* *Dill. Musc.* 349. t. 45. f. 8.

*Encalypta vulgaris.* *Sibth.* 277.

---

**FOUND** under the shade of rocks or walls in a dry shady soil in many different places, perfecting its capsules in March and April. Mr. Tocsdale, F. L. S. communicated it to us.

**Root fibres.** Plants growing in tufts, generally simple

and slender, with a few lanceolate, entire leaves.



229



100 24. Dec 10, 1870





## ENCALYPTA ciliata.

*Fringed Extinguisher-moss.*

---

*CRYPTOGAMIA Musci.*

GEN. CHAR. *Caps.* cylindrical. *Fringe* of 16 linear upright teeth. *Veil* campanulate, inflated, wide.

SPEC. CHAR. *Veil* toothed at the margin. Stem branched. Leaves lanceolate.

SYN. *Encalypta ciliata*. *Hedw. Sp. Musc.* 61. *Sm. Fl. Brit.* 1181. *Turn. Musc. Hibern.* 18.

*Leersia ciliata*. *Hedw. Crypt. v. 1.* 49. *t.* 19.

*Bryum extingtorium*  $\beta$ . *Linn. Sp. Pl.* 1581. *Huds.* 476. *With.* 817. *Hull.* 258. *Lightf.* 719.

*B. calyptrâ extingtorii figurâ, majus et ramosum*. *Dill. Musc.* 350. *t.* 45. *f.* 9.

---

A NATIVE of rocky mountainous places, specimens of



1418



*Adiantum species* (L.) *Adiantum* L.







[ 1419 ]

## ENCALYPTA alpina.

*Alpine Extinguisher-moss.**CRYPTOGAMIA Muri.*

GEN. CHAR. *Caps.* cylindrical. *Fringe* of 16 linear upright teeth. *Veil* campanulate, inflated, wide.

SPEC. CHAR. *Veil* roughish at the margin. Stem branched. Lid as long as the capsule. Leaves ovato-lanceolate, acute; the uppermost hair-pointed.

GATHERED on rocks about the very summit of Ben Lawers by Mr. G. Don in October 1804. We have never seen it before, nor can we meet with any description answerable to it.

The whole plant is smaller than that in our last plate. Stems branched, forming tufts scarcely an inch high. Leaves dark-green with a red rib, lanceolate inclining to ovate, entire, pointed; the uppermost tipped each with a longish hair.





*Pluchea Indica L. var. Indica*



[ 2 ]

**ENCALYPTA streptocarpa,**  
*Spiral-fruited Extinguisher-moss.*

**CRYPTOGAMIA Musci.**

**GEN. CHAR.** Caps. cylindrical. Fringe of 16 linear upright teeth. Veil campanulate, inflated, wide.

**SPEC. CHAR.** Veil contracted and jagged at the margin. Stem branched. Leaves oblong. Capsule spirally furrowed.

**SYN.** *Encalypta streptocarpa*. Hedw. *Sp. Musc.* 62. t. 10. f. 10--15. Sm. *Fl. Brit.* 1182.

*Bryum ciliare*. Dicks. *Crypt. fasc.* 4. 15; exclusive of the synonyms.

*B.* n. 1828. Hall. *Hist.* v. 3. 48. t. 45. f. 9.

*Hypnum saxatile erectum*, ramulis teretibus, foliis subrotundis saturatè viridibus. Dill. *Musc.* 835. t. 43. f. 71.

**FOUND** by Mr. Dickson on the mountains of Scotland. Specimens from himself, one of which is the tallest in our plate, the other being from Switzerland, have enabled us to determine his plant; while an investigation of the herbarium of Dillenius has discovered the true synonym of that author, who has hitherto been erroneously quoted, and who never saw the fruit of this curious moss.

This is much larger than any other of its genus. The stems, which grow in tufts, vary in height from 1 to 9 inches or more, and are mostly branched; they are entirely clothed with dark-green, oblong, entire, obtuse and rounded leaves, imbricated every way, incurved and twisted when dry, each furnished with a strong coloured mid-rib. Fr. 1-stalks at first terminal, soon becoming lateral, solitary, nearly erect, strong, purplish, naked at the base. Capsule erect, cylindrical, a little swelling at the lower part, brown, very neatly and curiously furrowed in a spiral manner, an unique instance of the kind, as far as we know, in mosses. Lid not so long as the capsule, straight, bluish, brown, red at the bottom. Veil large, cylindrical, smooth, shining, pointed, jagged, and somewhat contracted, at the base. Fringe red, straight, deciduous.



*See 11000 published by J. A. Sowerby - London*







[ 1281 ]

## ENCALYPTA Daviesii.

*Least Extinguisher-moss.*

---

CRYPTOGAMIA Musci.

GEN. CHAR. Caps. cylindrical. Fringe of 16 linear upright teeth. Veil campanulate, inflated, wide.

SPEC. CHAR. Veil furrowed, torn in the margin. Stem branched. Leaves awl-shaped.

SYN. Encalypta Daviesii. Sm. Fl. Brit. 1183.

Bryum Daviesii. Dicks. Crypt. fasc. 3. t. 7. f. 6. With. 835. Hull. 264.

---

FOREIGN botanists have not yet noticed this moss, the specific name of which was given by Mr. Dickson in honour of its original discoverer the Rev. Hugh Davies, who found it in Anglesea. Mr. R. Brown, now on a botanical expedition to New Holland, favoured us with specimens from the North of Ireland, having observed it on the rocks at Fairhead, and particularly on the fallen columns of the Giant's Causeway, growing in great abundance. It is perennial, but we are not informed of the precise time of its fructification.

The stems are branched, leafy, and grow in dense tufts half an inch or somewhat more in height. Leaves crowded, awl-shaped, keeled, entire, dark-green, curled inward by drying. Stalks terminal, erect, solitary, short, tawny, sheathed at the base. Capsule cylindrical inclining to ovate, short and abrupt. Lid convex, with a tapering straight point. Fringe short, inclining inwards. Veil yellow, shining, furrowed lengthwise, tipped with brown, and at length torn at the base.

It is not without great diffidence that we refer this plant to *Encalypta* rather than to *Grimmia*; but the linear teeth, and especially the inflated veil, have determined us. See the most common species of this genus in vol. 8. t. 558.

1882



March 2 1882. Published for J. S. Searcy, London.





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